

PART TWO

TOWARDS A MODEL OF THE DEVELOPMENT OF
CHILDREN'S CREATIVITY IN MUSIC

by

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Thesis submitted for the degree of Doctor of
Philosophy in Music, University of London
Institute of Education, 1987



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CHAPTER I

THE SEQUENCE OF MUSICAL DEVELOPMENT

Creativity and Musical Development

In the second part there is a detailed examination of children's musical compositions as examples of creative work. This will be seen to tie in with issues already raised in Part One. For example, the version of creativity that views it as a process of self-realisation will appear in the spiral model we have created of musical development which shows at which level (with a possible age) the child becomes concerned with self-expression and how this becomes refined into the musical gestures common in our society. This process of refinement may be linked to the ordering of personal experience raised by some writers. Other issues raised in Part One are freedom, the nature of musical imagination, memory, curiosity, originality, the relationship between associative-characterising and syntactical relationships, the nature of the creative person including aesthetic sensitivity with its sense of value, playfulness, the slumps in creativity, the role of skills, the potential of everyone to be creative at some level and the nature/nurture problem. All of these must be present to some extent in any cohesive model of creative musical development. This chapter proposes a model and the links between it and these issues will be examined in more detail in Chapter Two.

Introduction

Everyday observation tells us that children develop as they grow older and that this development relies on an interaction between the genetic inheritance of each individual and the environment - the physical world, home, school, society. A second 'commonsense' observation is that there is an element of predictability about this process of development. We learn to walk before we can run, to stand before we can do either, to imitate before we utter original statements, to become capable of sexual reproduction only when adolescence is reached. Of course, each person imposes his or her own style on these developmental processes, but that there is development and that there are at least broad patterns of development are facts beyond dispute. Furthermore, it seems important, especially for teachers and parents, to have some understanding, a set of expectations that correspond to the maturation of children in their care.

Maccoby tells us that we should notice two general meanings of the term development. The first, which he calls a 'softer' meaning is the idea of sequence, that development will occur in a certain order, early behavioural acquisitions are necessary, though not sufficient, for later steps to occur.⁽¹⁾ The second meaning 'goes beyond sequence', and points to broad developmental changes that occur in almost all children according to a fairly standard timetable.

(1) Maccoby, E.E., Socialisation and Developmental Change, Child Development, 55, 1984, pp. 317 - 328.

In our study of the musical compositions of children between the ages of 3 and 11, we have found that there is a sequence, an orderly unfolding of musical behaviour, that there are stages through which the musical utterances of children can be traced. Because our study took place largely in one school it would be unwise to be too dogmatic about identifying broad developmental changes to a fairly standard timetable, especially to generalise this to 'almost all children'. However, this possibility is not ruled out and we have found several writers who from quite different perspectives, seem to support our findings.

Strangely, with one exception, those researchers directly concerned with the musical development of children have been least influential for us. The classic text by Helmut Moog, The Musical Experience of the Pre-School Child⁽¹⁾ has, by definition, little to say about the school-age child but is rich in detail as far as the very early years are concerned. Much of the observation is concerned with response to music in the role of audience, including an element of movement to music, in reproductive accuracy in singing and in the kind of song

(1) Moog, H., The Musical Experience of the Pre-School Child, trans. by Claudia Clarke, London, Schott, 1967, First published in Germany, 1968.

repertoire acquired by children. Less is said about children's musical utterances, the activity which we are calling 'composition', but we shall find Moog helpful.

A fine example of the analysis of children's compositions is to be found in Loane.⁽¹⁾ Here, he examines the compositions of 11-14 year olds, undertaking an 'assessment' for formative purposes, in order that the teacher might respond adequately to the children's music. His work is theoretically based on the ideas of Langer: music is seen as a 'way of knowing'. This sensitive and subtle approach to compositions of children, while saying little about development in the sense we are using the term, illustrates very clearly the value of declaring a conceptual framework. Without such a framework, any account of musical development in children will be simply descriptive, lacking in interpretative power and the ability to relate the music of a particular child to the music of others.

By happy chance, one of us was engaged in developing a conceptual framework relating activity in the arts to human play: at the same time, the other was working with children in primary schools, building up a library of tape-recorded data. The theory and practice have come together in what we think is a most exciting way, each illuminating and challenging the other.

(1) Loane, B., Thinking about Children's Compositions, British Journal of Music Education, Vol.1, No.3, 1984, pp. 205 - 231.

The Theoretical Basis

Our theoretical basis can be found in the paper The Arts in Education: Dreaming or Wide Awake?⁽¹⁾ Part of the discussion centres on the idea that play, a very important human activity, is intrinsically bound up with all artistic activity, the early and obviously playful activities of children being sublimated into activities such as painting pictures, playing music and reading novels. A powerful influence in the development of this view is Piaget, though not the Piaget of tightly formulated stages of development but the Piaget concerned with fundamental human processes, the ways in which we make sense of and grow into the world.

Piaget notes that play in very early childhood is characterised by the sheer pleasure of exploring and mastering the environment, what he calls 'a feeling of virtuosity or power'⁽²⁾. We can see how this impulse to mastery evolves into musical activities. The handling of voices and instruments, the development of ensemble skills, the use of notations, delight in the virtuosity of others: these are obvious elements of mastery. There is surely a continuum from the pleasure experienced by a baby who has just learned to drop things out of the pram, and for sheer joy does this over and over again, and the satisfaction of the sitar player technically exploiting the potential of a particular râga.

(1) Swanwick, K., The Arts in Education: Dreaming or Wide Awake? Special Professorial Lecture, London University Institute of Education, 1983.

(2) Piaget, J., Play, Dreams and Imitation in Childhood, London, Routledge and Kegan Paul, 1951.

We ought to notice one other thing: control of materials presupposes delight in materials. Sounds themselves seem to be intrinsically interesting before and during the process of trying to control them. We remember Grieg being excited as a boy of six by chords of the ninth, simply as a sound phenomenon; or Kenneth Graham (the author of The Wind in the Willows) writing about his boyhood 'strumming' on a piano where some notes were red and some were green and some told of armies marching and, up above, (it has to be a grand piano) 'the little white men leap and peep and strive against the imprisoning wires'; and also Stockhausen, who writes for his performers of Gold Dust, 'after four days, late at night, without conversation beforehand play single sounds without thinking which you are playing. Close your eyes just listen'.

Another Piagetian concept is called, simply, imitation. Imitation is also easy to identify in early childhood: it happens when a child submits to the world and attempts to resemble some aspects of it. S/he may identify with and pretend to be a parent, a friend, a tiger or a teacher. When we imitate something or someone, we give up some part of ourselves and take on characteristics of whatever is imitated. For Piaget, imitation represents a tendency towards "accommodation". We accommodate to, change ourselves, pretend to be like; rather than impose our idiosyncratic view upon the world.

Elements of imitation are more obviously present in the arts when they are representational; that is to say, when there is reference to events in life - in stories and drama, in poems and paintings. Imitation is also obvious enough in programme music and in opera but it is also true that even in the most 'abstract' musical works there are

elements of imitation. Every performance of a Bach fugue has its own particular universe of gestures, of feeling and emphasis; it has expressive character. Musical characterisation is a development from the "let's pretend" imitation that we find in early childhood.

A little later on in infancy, play becomes imaginative and, according to Piaget, 'subjects things to the child's activity, without rules or limitations'. Anyone who has close relationships with young children will know about imaginative play. Objectives and people are transformed into other than themselves and sometimes things are conjured out of the air. At one time, one of the writers was accompanied on walks not only by his three children but also by a horse which, though invisible, made great demands on us all and caused us to open gates rather than climb styles. This enigmatic animal was a fairly constant companion for several months and was a vivid part of the imaginative world of this particular child. For Piaget, imaginative play tends towards what he calls "assimilation" and stands at the opposite pole from imitation. The imaginative play-world is made by the child for the child: events and objects are assimilated into this world and transformed to fit into the unique make-believe perspective of the individual.

In imaginative play we create a world of transformed relationships which we ourselves govern. This is clearly so with the composer-musician. A new realm is created in a musical composition: for example, although the musical vocabulary of Mozart might often be fairly commonplace, "of its time", it is transformed by the creation of new relationships, through the imaginative power of the composer. Imaginative play has to do with structural transformations, with personal interpretation, re-constituting reality.

Figure 1 may help to summarise the relationships between the concepts of mastery, imitation and imaginative play, and the analogous musical play elements; control of sound, expressive character and structure. [Figure 1].

As we shall see, this theoretical starting point allows us to interpret and to order the musical offerings of children in a developmental way. For, it becomes clear from our data that the musical compositions of children tend to follow a broad sequence of development through stages of Mastery, Imitation and Imaginative play, in that order. Moog has observed the beginning of this process with six-month old babies, where 'attention is given first and foremost to the sound itself'.⁽¹⁾ He cites other researchers who support this view, especially Mursell. There are strong reasons for believing that a young child's primary responsiveness to music is first and foremost the tone itself, and not, as is sometimes asserted without any good evidence, to rhythm or to melody.⁽²⁾ Mursell is prepared to emphasis this point, stating that during the pre-school and even the kindergarten period, the child is much more pre-occupied with the tonal content and appeal of music than with anything else about it .

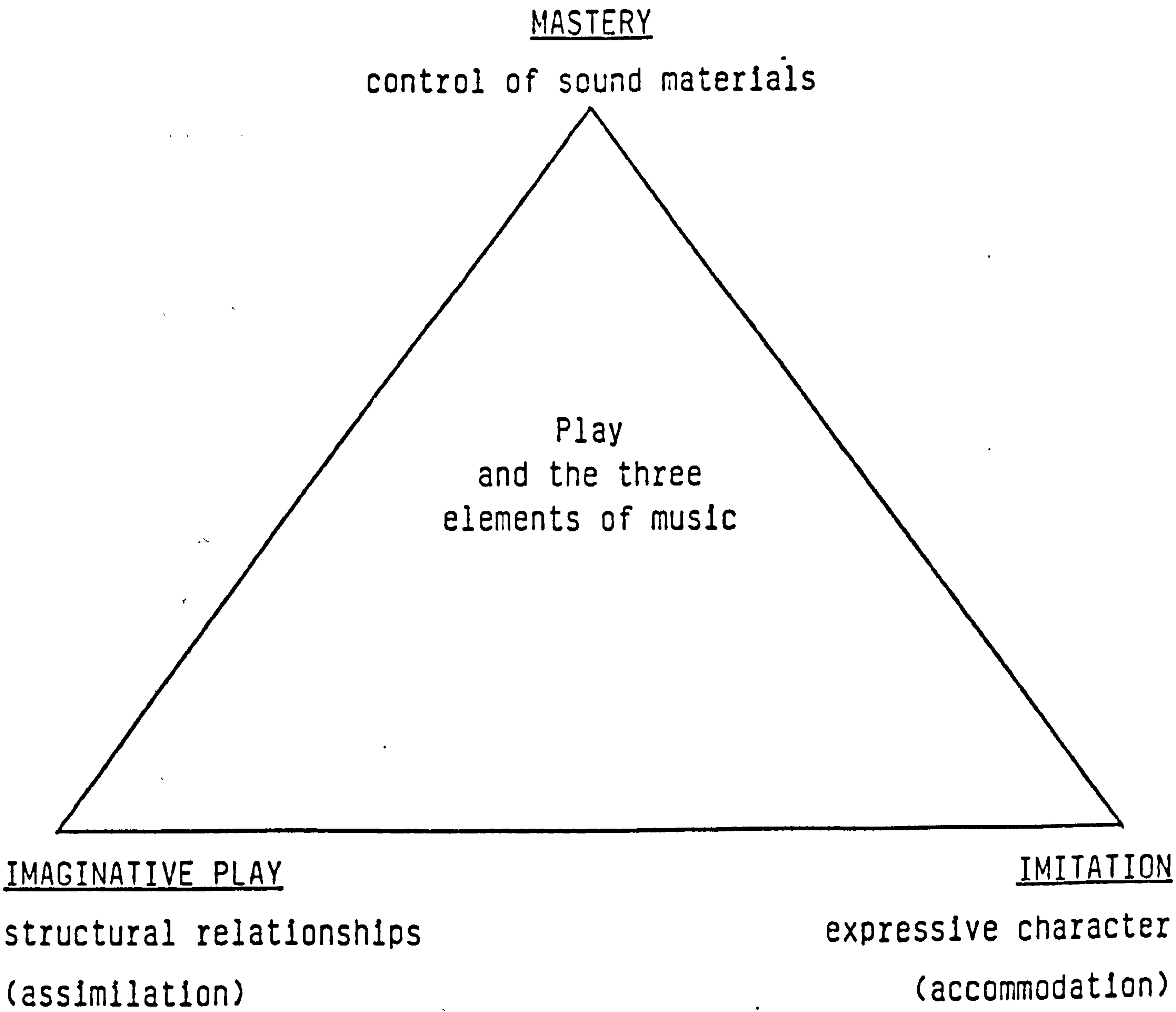
Moog notes that his own observations of young children lead him to the conclusion that 'during the second year it is still the sensory impression of the sound, together with the rhythm, which lie at the heart of musical experience'.⁽³⁾ Moog also observes that before the

(1) Op.cit. p. 55.

(2) Mursell, J.L., Education for Musical Growth, Boston, London, Ginn, 1948, p. 30.

(3) Op.cit. p. 86.

Figure 1



age of one year the songs of children bear 'no resemblance to what is sung or played to them'⁽¹⁾. A good deal of what Moog calls musical babbling goes on, and this is clearly related to the fascination of sound itself and the pleasure of beginning to control sound. After the age of 1, children begin to demonstrate the art of reproducing what they hear, a form of mastery which increases progressively. There is then, a clear indication here of a move from interest (delight) in sound towards control of materials and this seems to be the first important shift in the musical development of very young children.

Although Moog does not develop a unified theoretical framework, he identified an important change during the second year concerning movement to music. Somewhere between the ages of 18 months and 2 years children begin to 'match their movements to the rhythm of the music'. This is rather fitful and short-lived and not every child does this at this age but it is surely the first presage of response to expressive character in music. When a person moves to music what we are seeing is a physical imitation of the sonorous movement of music and, although movement to music made spontaneously tends to diminish in the later years of infancy, its presence at this stage is a helpful outward manifestation of this relationship.

One further example from the work of Moog will serve to reinforce the view that our preliminary picture of musical engagement has some foundation and that there may indeed be a sequence of development to be observed, if we are patient enough to look for it.

(1) Op.cit. p. 62.

Moog⁽¹⁾ notes, that a new category of singing emerges at around the age of 4. He calls these songs 'imaginative songs', and fortunately the word imaginative here coincides with our use of it (unlike his use of the word 'imitative' which refers only to the mastery of a song learned by imitation). Some of these songs tell stories, some of them are totally novel and some incorporate elements of songs already known but rearranged in new ways. Here then, is a hint of the emergence of imaginative play, the forming of new structural relationships from scraps of tunes already absorbed during earlier stages, though Moog would not consider the 4-year-old capable of "original creation".⁽²⁾ By the time children come to school they have visited every corner of our theoretical triangle with Mastery most evident but with the first glimmers of Imitation and Imaginative play.

Of course, development does not stop at this age and, as we shall see, each mode of playfulness will be revisited and given an emphasis at other stages of development. Imitation and Imaginative play will become more firmly evident in musical activities later on.

Collecting and Analysing the Compositions

The first empirical task was to try to verify our hunch that musical development occurs in a particular order and that this sequence can be observed in children of school age. We needed a pilot study.

(1) Op.cit. p. 21.

(2) Op.cit. p. 114.

The most direct and uncomplicated way of doing this is to observe the musical compositions of children. We define "compositions" very broadly and include the briefest utterances as well as more sustained invention. Composition takes place when there is freedom to choose the ordering of music, without notational or other forms of detailed performance instruction. Others may prefer to use the terms improvisation, invention or "creative music". All of these fall within our definition of "composition". The advantage of this approach is that we are observing relatively undirected musical behaviour rather than trying to analyse what children say about music or how they perform in tests.

Musical offerings were collected from children aged 3 to 9 years in a South London primary school. The school was racially mixed, having children of Asian, Caribbean, African, Northern and Southern European backgrounds. The children chosen were taken so as to be representative of the mix in the school, both girls and boys. They included those having individual or group lessons on an instrument and those who did not. All the children had class music lessons with a music specialist (the researcher) that varied in length from 20 minutes a week for the 3 to 4 year olds to two half hours a week for the 5 to 7 year olds and one half hour a week for the 8 to 9 year olds. In some classes this music work was followed up by the class teacher, particularly with the 3 to 4 year olds. The lessons all included elements of musical composition and some of the older children had been involved in quite long, complex projects, including composing music for stories of some half-hour's duration, sometimes with dance and drama.

Each child was "interviewed" individually or in a small group (2 or 3 at the most) and was given a variety of musical tasks:

1. First of all, s/he was given one or a pair of maracas and asked to make up a pattern for it. (This instrument was chosen on the grounds that it is easy to manipulate, demanding the least technical skill, shaking being a baby's first movement.)
2. Secondly, s/he was given a tambour and asked to make up a pattern for it played with the hand. (This was considered the next most easy instrument to play.)
3. Thirdly, s/he was offered a choice of instruments with which s/he would be familiar (tambour, maraca, Indian cymbal, triangle, claves, castanets, tambourine), including the maracas and tambour already played, and asked to make up a piece with it.
4. The child was offered a choice of instruments with which s/he was not familiar and asked to make up a pattern for it. (The choice offered was gato drum, cabassa, tambour, guiro, bass drum, tubo and large cymbal.

It was hoped to find out the grounds on which the choice was made but the direct question produced little response.)

5. The child was offered the chime bars of E, G and A and one beater and asked to make up a pattern for them. (This gave a limited number of pitches to control.)

6. The child was offered a xylophone with a pentatonic scale and two beaters and asked to make up a piece.
7. The child was offered a metallophone with the scale of C major on it and two beaters and asked to make up a piece. (This further increased the pitch scope.)
8. The child was offered a fully chromatic xylophone with two beaters and asked to make up a piece. (This gave yet more freedom of pitch.)
9. The child was asked to "say something" like 'It is sunny and I am happy' on any of the instruments available. (This was designed to see if the introduction of an extra-musical idea (imitative play) produced different results compared with starting from sound materials.)
10. The child was asked to sing a song that s/he had made up. S/he was given the option of having words or humming or "lahing". Sometimes, if no response was forthcoming, the researcher sang a phrase to which the child responded. This usually consisted of lah, soh and mi. (The child would be familiar with this activity from class lessons.)

All these tasks were recorded together with the necessary conversation. Later, the procedure was refined so that each child was asked to repeat each task, to see the extent of his/her musical memory and note which elements in the composition survived, an indication of what was important to the child.

A tape was prepared, giving examples of the work of children aged 3 to 9 years. Three examples were chosen from the second attempts. The edited tape contained these pieces but in randomised age order. In actual age order, the following notes give a rough impression of what the judges heard. (All notations are approximate.)

Three year old girl:

- a) an attempt at a steady beat on a maraca with some half-pulse notes
- b) eleven steady drum beats
- c) an uneven and irregular exploration on a xylophone using two sticks going up and down the range of bars

Four year old boy:

- a) a steady beat pattern on a drum involving some half pulse notes
- b) an irregular exploration on the gato drum with two sticks, sometimes hitting the wooden surround
- c) an exploration on a xylophone using two sticks involving some pairs of quavers and with some underlying sense of a beat

Five year old boy:

- a) long irregular beat pattern on maracas which are sometimes hit together
- b) Music Example 1



starts a long pattern on small cymbals - developed into a pattern involving some shorter and some longer notes - a fairly steady underlying beat which becomes more erratic towards the end - no sense of ending, several attempts at stopping

- c) a long exploration on a xylophone - developed into a pattern involving short and long sounds with a fairly steady underlying beat - sometimes two notes are used together and sometimes the wood of the instrument is hit

Six year old girl:

a)



Music Example 2

on a drum

b)



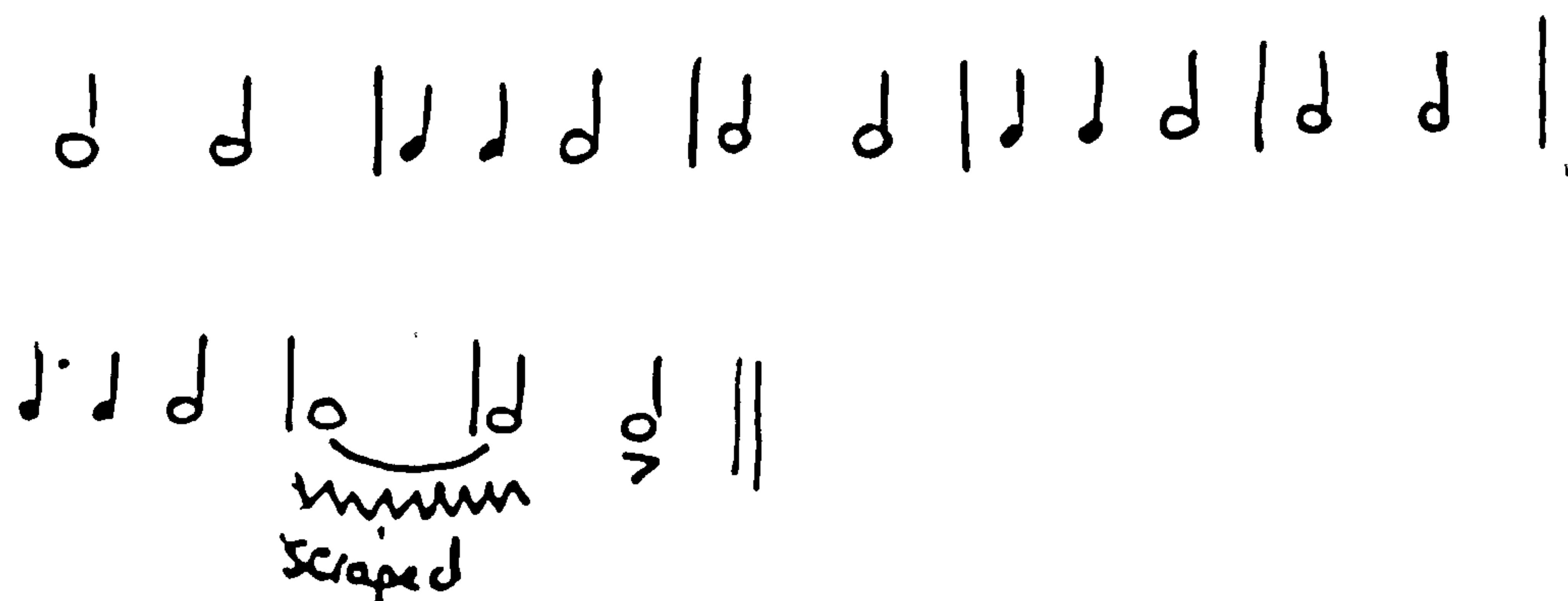
Music Example 3

on a small cymbal

- c) an eight bar tune on metallophone involving a good deal of repetition and accompanied by a beat on small cymbals and Indian cymbals (difficult if not impossible to notate)

Eight year old girl:

a)



Music Example 7
on a drum

- b) a development of a melodic pattern involving augmentation and diminution on three chime bars
- c) twelve bars on the xylophone not clearly defined because the beat gets faster and so appears unsteady

Nine year old girl:

a)



Music Example 8
on a drum

- b) an eight bar tune in 4/4 time in clear-cut phrases involving some half pulse notes and some repetition of ideas on three chime bars
- c) an eight bar tune in four-time on a diatonic xylophone with some repetition of ideas - clear cut phrases - some sense of the potential of the diatonic scale - some syncopation

Three independent judges were asked to listen to the tape recording containing the three items from all seven children, ranging from the age of 3 to 9. The age of each child was not revealed and the age order was randomised. The judges were asked to rank the ages of the children from the evidence they heard on the tape. One of the judges, a teacher but not experienced musically, found this task almost impossible and said so, but the other two, who were both musicians and experienced teachers, managed the task without too much difficulty and gave interesting reasons why they thought that a particular group of compositions were from an older or a younger child. These comments were frequently to do with the level of mastery and structural organisation.

If we look at the estimated ages given by the two appropriately experienced judges and compare them with the actual age we find a correlation.

Figure 2Actual and estimated ages of children

Actual ages	9	8	7	6	5	4	3
Judge 1	8	9	7	4	5	6	3
Judge 2	7	8	9	4	5	6	3

The statistical probability of the two judges agreeing so closely with each other and with the actual age order by mere chance is fairly remote.

(rho, judges 1/2 = .89; rho, actual age/judge 1 = .82;
rho, actual age/judge 2 = .71)

This is quite helpful. There do appear to be observable differences between the musical utterances of children that vary with age, at least when there is a musical environment in the school. Questions remain: what are these differences and can they be found in a larger sample? In order to answer it is necessary to further refine the model so far developed, though it should be pointed out that the categories about to be described were not pulled out of "thin air" or merely derived from the literature but emerged and were clarified as further analysis of more material proceeded.

Towards a Model of Musical Development

More compositions were collected from children aged 3 - 11. Forty eight boys and girls of various racial and social groups in the school were chosen and they were taped once a term over 4 years. At

each session each child produced nine compositions. These were tasks 1, 2, 5, 6, 7, 9 and 10 of the original ones. Tasks 3 and 4 were combined so that the child was offered a selection of unpitched instruments of which some were familiar, some unfamiliar. Task 8 was omitted as it produced results very like task 7. A new task was introduced of creating a piece for a group of instruments by getting the researcher and the other children in the room to play instruments together. The child was completely free to choose the instruments for the others and tell them what and when to play. The instructions given varied greatly, from just giving the others the instruments and leaving them totally free to do what they liked when they liked, to quite specific instructions from the older children. Although over a thousand compositions were collected only 745 were analysed as a pattern quite clearly emerged. The emergent picture was strikingly confirmed for us by Malcolm Ross, who, in a highly speculative book,⁽¹⁾ puts forward his own description of the process of aesthetic development in the arts. For the purposes of comparison with our own analysis, it will serve to put out some of the key statements made by Ross giving four periods of development in music, especially those categories of statement that coincide with his descriptions of the process in Art and Drama.

1. (Years 0-2) Pure sensuous engagement with sound materials, along with experimentation and beginning to relate music to feeling or mood characterises, for Ross, the early years.

(1) Ross, M., The Aesthetic Impulse, Oxford, Pergamon Press, 1984, pp. 129 - 130.

2. (Years 3-7) This stage is characterised by musical doodling, especially vocal doodling, and the progressive mastery of what Ross calls 'sound structures and patterns'. He notes the beginning of anticipation in music. Interestingly, in Art and Drama he begins to see perception of expressive gesture developing, of signs as 'representative' of experience.

In our terms, these two stages seem to correspond with delight in sound itself leading to control of materials, the play element of 'Mastery', moving into 'Imitation', where expressive character, gesture, mood, and so on, are recognised and reproduced.

3. (Years 8-13) This, for Ross, is marked by concern with the 'conventions of musical production', a desire to 'join the adult scene'. Programme or 'narrative and descriptive music makes sense'. There is a desire to become 'conventionally proficient' and teachers must 'satisfy the demand for greater conventional competence'.

(We shall meet this concept again shortly when we refer to an interesting paper by Robert Bunting⁽¹⁾. For the moment it will suffice to notice that the important element here is that of working within an accepted musical idiom.)

(1) Bunting, R., The Common Language of Music, Music in the Secondary School Curriculum, Working Paper 6, Schools Council, York University, 1977.

4. (Years 14+) Here music is seen as taking on greater significance as a form of personal expression, 'embodying, meaning and vision', significant for an individual or for a community.

If we are to take Ross's observation, that powers of anticipation begin to develop during the second stage, as signifying the beginnings of concern for structural relationships, then the overarching sequence of development seems to run through Mastery and Imitation to Imaginative Play. We would emphasize that each one of these is swept up into the next developmental thrust and is repeatedly revisited. For example, if we begin to handle a new instrument, or work in a new idiom, or work on a new piece of music, we are sent immediately back to the problems of mastery. It is important to be clear that we regard these three stages as cumulative and cyclical and, to use the words of Maccoby, recognise that the 'early behavioural acquisitions are necessary, though not sufficient, for later steps to occur'.

We have referred to the work of Bunting which appeared as Working Paper 6 of the Schools Council Project, Music in the Secondary School Curriculum, (1977). This somewhat overlooked paper has as its focus the idea of the Vernacular, "the common language of music", what Ross calls the "conventions of musical production". It seems a remarkably perceptive view of developmental possibilities written from the perspective of a teacher in a secondary school.

Bunting identified several modes of musical perception and these descriptions fit well into our own developmental sequence, as established

by analysis of the children's compositions. He does not always appear to order his modes of musical perception in a developmental sequence but there are hints of this.

MASTERY - Sensory response to sound materials evolving into the Manipulative

Bunting uses three terms here: neurological; acoustical; mechanical. The neurological mode he describes as the reaction of the nervous system to sensations of timbre, rhythm, pitch, quite independently of the analytical mind. He notes that the use of very high or low pitches or loud or soft instrumentation brings the neurological impact of music forward. Related to this, the acoustical mode has to do with the interaction of sound with the size and design of buildings in which music is played. We can be 'affected as much by the degree of resonance as sound is given, as by its pitch or syntactical meaning'. He gives as instances the use of open strings and mutes or the use of space and distance for musical impact. In the compositions of our very young children at the age of 3 or 4, we notice an interest in very soft and loud sounds, a big bang on the bass drum followed by sheer delight or fear, or a preference for the very soft sounds of a shaker or Indian cymbal. Both the neurological and the acoustical mode are evident in the young child's primary concern with the tone colour of an instrument, experimenting with short and long sounds, or slow and fast shakes of a shaker, or fingers and fists on the surfaces of drums.

In the work of our younger children (3-4) it is often difficult to sort out exploration of tone colour from problems of mastery. Below this age, it is clear that the "sensory impression of the sound", as Moog puts it, predominates. The programmatic task at 3 to 4 tended to produce pieces still primarily concerned with timbre, as when a tubo (a small shaker) is explored, by a boy aged 3.10 in response to the task of making up a piece about "Spring". As children get older, the exploration becomes more deliberate; as in a piece by a girl aged 4.3 for tambour, when, in the course of a long composition with an uneven beat, she hit the wood intentionally, and an "Autumn" piece for a pair of plastic cymbals, in which interest lay in the cymbals, which were sometimes clicked together and sometimes rubbed. The scraper provided opportunities, not only for scraping, but also for tapping, as in this short piece by a girl aged 4.8:



Music Example 9

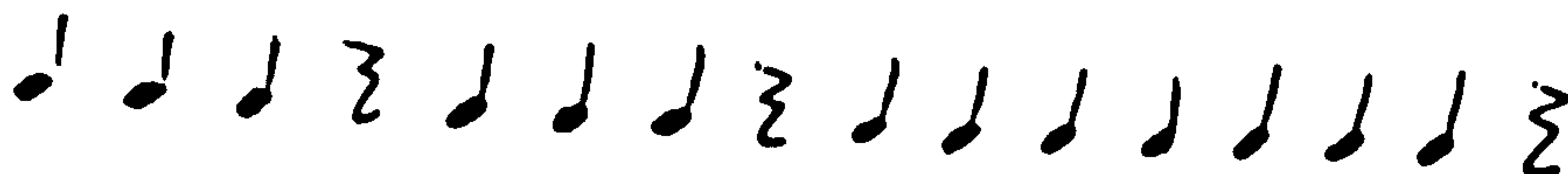
The wooden agogo provided the same girl with the chance of exploring rhythm and timbre together, giving rise to variations on:



Music Example 10

with a vague pulse.

Both tambour and maracas provided children with chances for the exploration of timbre. A piece by a boy aged 4.5 shows the hand being rubbed over the surface, while a boy aged 4.7 uses his hand flat and in a fist. Maracas are sometimes used together, sometimes separately and are sometimes knocked together. A composition from a girl aged 4.2 has the two knocked together, although many other aspects are explored such as gradual changes in dynamics and a change of speed at the end. The beginning of phrase structure is shown in the opening, which is repeated:



Music Example 11

Clearly, all these activities belong in the category of Mastery and move from curiosity and delight into experimental manipulation. There are other features. Bunting notes that 'a composer can make music out of purely mechanical processes (for instance where hands on a keyboard move in contrary motion he may accept whatever harmonies result)'. Younger children, are fascinated by the alternation of the sticks on pitched instruments and produce pieces in which pitch organisation is determined by mechanical alternation often producing trills and tremolos. Other patterns go up and down a series, as in a pentatonic piece by a girl aged 5.0:



Music Example 12

A piece by a boy of 4.5 has exploration of scales and sequences starting on apparently random pitches, although there is some influence of the extremes of the instrument in the choice of starting and finishing notes :



Music Example 13

Delight in sound and the urge towards manipulative mastery through exploration is swept up into succeeding stages of development and is evident in the musical productions of children of all ages. At these later stages though, interest in and control of sound is combined

with a developing concern for expressive character and structural relationships. The more developed explorations of older children include the use of different beaters for different purposes and experimentation with more systematic ways of organising sound. Older children, when playing together, usually give some kind of starting and stopping signal and use a variety of methods of combination, including the 'layer' device, where players start and finish in series, building up and then reducing the texture. Younger children have very little idea as to how their sounds may be combined with the sounds of others. We noted an exuberant piece for gato drum and metallophone, in which both players pursued their own pulse patterns regardless of each other. There was, however, an instruction to stop!

The visual and physical characteristics of instruments continue to exert an influence on musical productions but in more sophisticated and structured ways. The ubiquitous glissando appears in early musical offerings as an ending. With older children the glissando is often used as a contrasting device, as we noted in a piece by a girl aged 11.5:



Music Example 14

and most striking impression of music when it is rediscovered is of its sensory surface, the sounds themselves. This is particularly noticable at the start of a concert, for example.

IMITATION - Personal Expression moving towards the Vernacular

Bunting uses the term illustrative, 'a way of giving music meaning by association'. He suggests a range of illustrative devices, from such obvious things as a drum roll signifying thunder, to the more subtle possibility of a drum roll signifying anger. This is important for us. In our category of Imitation, we are not referring to a rather crude copying of sounds using musical instruments. This kind of procedure, the literal making of 'sound effects', is rarely present in the musical work of our children of school age; nor is it observed by Moog at younger ages. Even at its simplest, music is much more abstract than this.

We are more concerned with the tendency of music to be expressive, without being in any way illustrative, or representational. Music rarely appears to have a conveniently describable 'subject', yet, does seem to contain an expressive charge: we hear gestures, character and movement in music. Bunting appears to believe that this level of musical perception, which he calls the 'symbolic mode' appears late, towards the end of schooling, if at all. In this he may be misled by children's responses going 'underground', blocking out the gaze of the outside observer, especially in adolescence. We detect expressive quality much earlier on in the musical behaviour of children. Bunting puts it rather well when he says that musical rhythms and tensions seem to mirror the flow of feeling within us in a direct, non-

performance that the child is taken over by a sense of shining. She herself shines: the process of imitation is clear. Two songs, one by a girl aged 4.5, the other by a boy aged 4.7, clearly show that they are able to catch and hold expressive character in their music:

Fish are far(?) Fish are there The fish are grow-ing in the
wa-ter

Vague tuning

Music Example 18

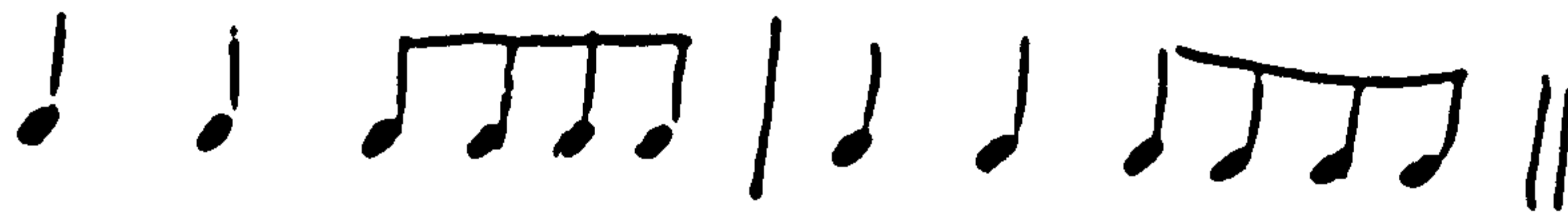
The sun is out, the sun is out The trees are sum-me-
y The leaves are out the leaves are com-ing the
leaves are all a-round

Music Example 19

These songs go well beyond manipulative control. They are also remarkable in that they show the first beginnings of the musical Vernacular.

The instrumental pieces are much less developed but we can detect an expressive intention in a good number of them - a reflective quality about a chime bar improvisation, despite its unsteady pluse, an expansive gesture in a maraca pattern which starts as a steady pluse with no regular metre and then builds up with a crescendo and accelerando, to an explosive climax at the end (a boy aged 4.5 and a girl aged 4.7). Changes in loudness and speed frequently play a crucial part in determining expressive character.

The important shift at this stage of Imitation, is from the personal and idiosyncratic towards socially shared Vernacular conventions. The imitative aspect of expressiveness, the sense of "pretending to shine" in musical gestures, may begin as Personal expression but is soon swept up into a community of musical common-places; shaped phrases and received melodies, rhythm patterns and repeated formulas. What Bunting calls "the common language of music" takes over as the dominant influence, as learned songs are incorporated into the musical inventions of children, as metrical patterns and phrase are learned within a broad musical culture. Moog noticed this to some extent in the singing of his 4 year olds but it becomes much more evident by around the age of 7, when musical gestures are more stylised, borrowed from tradition, though perhaps with modifications:

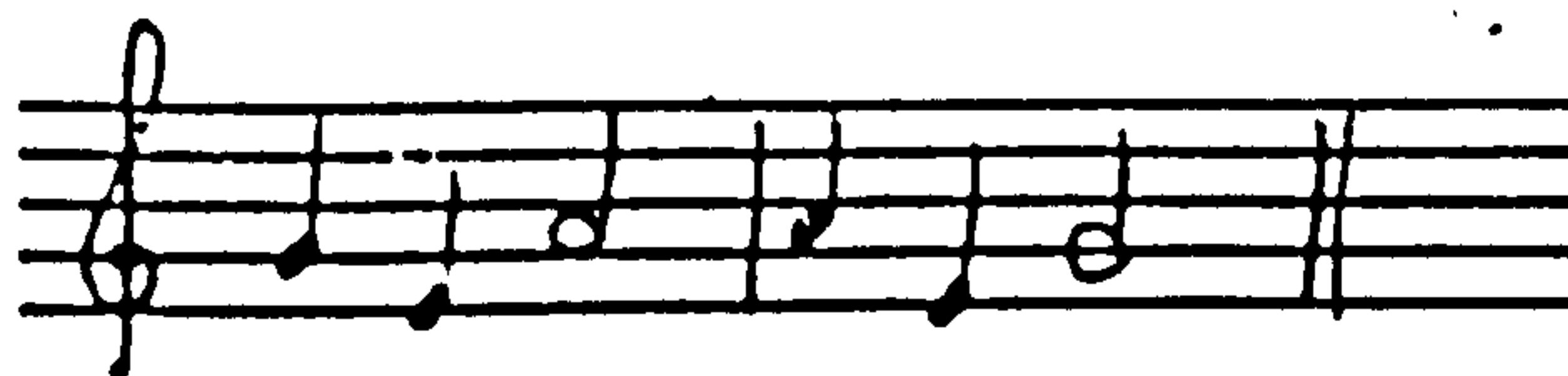


Music Example 20

The contrast between this kind of thing and 'Shine' is striking yet very frequently observed. What is imitated is not so much an expressiveness arising directly from the child's state of feeling but an entry into a world of cliché, where expressive character appears to be second-hand. This may seem a regressive step but it is certainly an important and necessary one if children are to share musical procedures. The music is not without expression but the expressiveness tends to be borrowed, as when common rhythmic or melodic patterns are repeated, or when fairly conventional answering phrases appear - unambitious musical gestures:

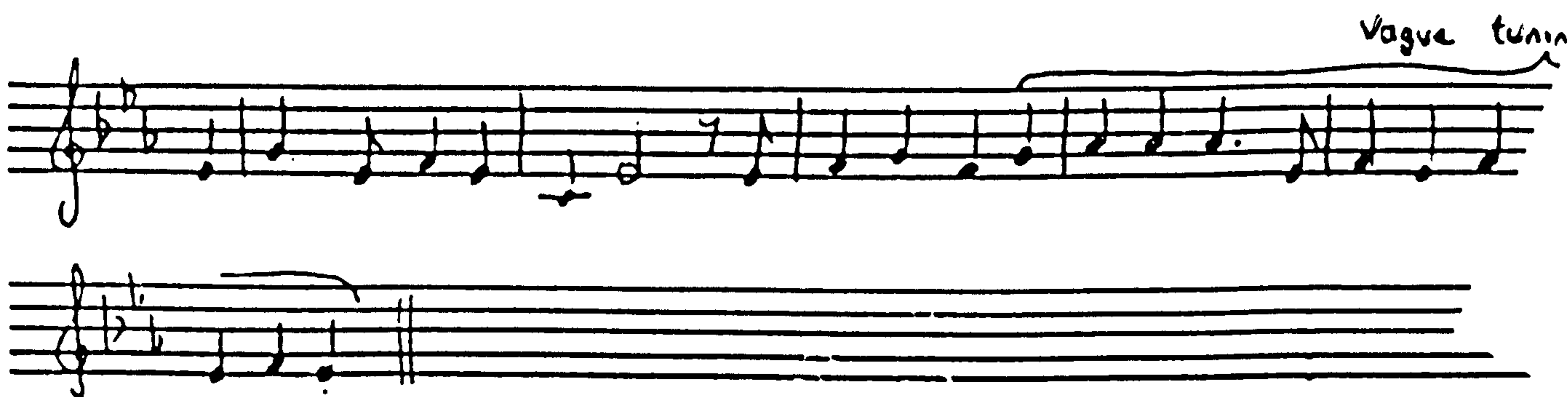


Music Example 21



Music Example 22

It is often difficult to decide what is happening to melodies that are already known. Is the tune being attempted, though inaccurately, or is a new tune being invented on a kind of sub-conscious model of that already learned, as in the case of this transformation of A Sailor went to Sea ?



Music Example 23

Of course, just as we shall still find examples of sensory exploration and manipulative interest, it is also possible, throughout this long stage of development, to find direct personal expressiveness. The main thrust of development though, is from the Personal to the Vernacular, from individual expressiveness to that which is socially shared. As Ross puts it: there is a desire to become 'conventionally proficient'. As we shall see, this desire returns again in a much stronger form in the third main thrust of development, which is related to Piaget's concept of imaginative play.

IMAGINATIVE PLAY - the Speculative merging into the Idiomatic

We take from Bunting the term Speculative. He writes: 'a composer may seek out new ideas by speculating on accepted musical conventions. Extreme cases are atonality and indeterminacy but less radical speculations have always been part of our musical tradition'. Any musical speculation clearly depends on a grasp of the vernacular, for speculation implies that there is not only sufficient manipulative ability but also a history of personal and public expressiveness; there has to be a context of socially shared musical possibilities in order to create surprises and deviations from these norms. Around the age of 10, though usually closer to 11, we notice the emergence of the Speculative out of the commonplace of the Vernacular. It is on this ability to identify new relationships that any grasp of musical form is predicated.

First attempts at musical speculation sometimes appear to be a kind of regression to earlier stages of manipulative insecurity. Some of the earlier fluency seems to be lost in a new phase of experimentation which is often discussed on melodic development. A typical example comes from an 11 year old girl:



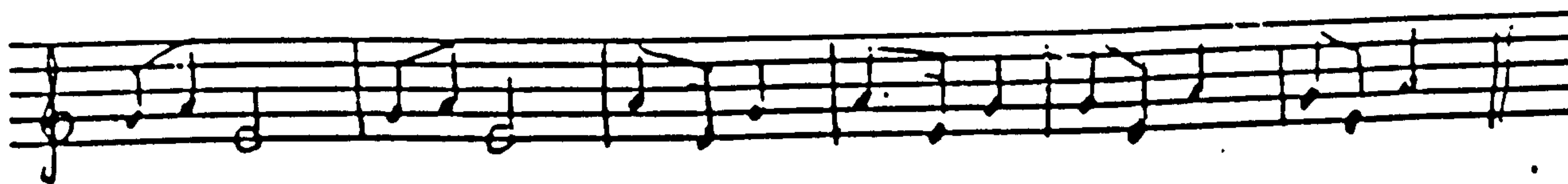
Music Example 24

Some basics of the Vernacular - steady pulse and phrase - seem to erode as a search begins for the exact pitches which help to generate structural interest:

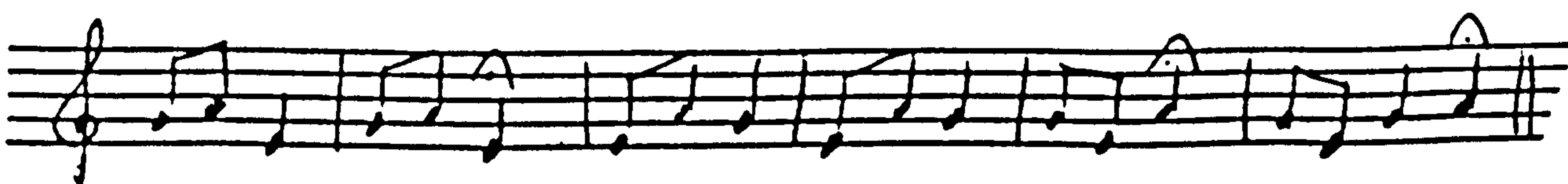


Music Example 25

We notice in a piece by a boy aged 11 a similar concern with melodic development, employing a mixture of metre in the first instance but on repetition becoming fixed in duple time:



Music Example 26



Music Example 27

Another boy of 11 appears to be speculating with melodic inversion. There is an initial hunting for a note as the inversion pattern is started and (probably) a mishit at the end:



Music Example 28

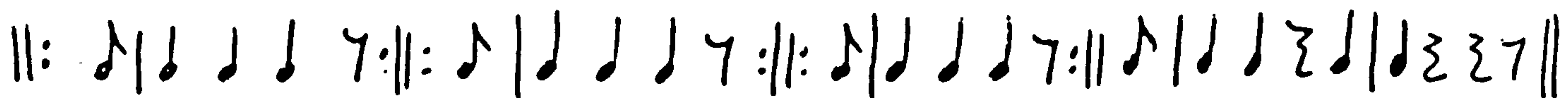
A song by a girl aged 11.6 shows a bold attempt at atonality. Here again, the rhythmic control seems subordinate to searching for notes within a new structural framework of pitch relationships:



Music Example 29

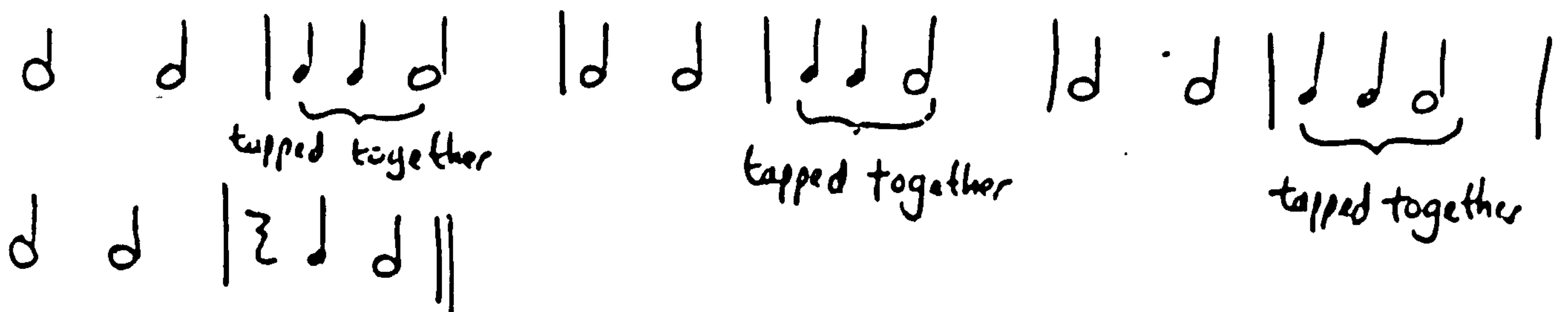
We also find at and after the age of 11 many examples where speculation is more securely integrated into a style. This permits more effective surprise. The next example, played on a gato drum, shows the speculative impulse working in two ways. Each repeated section employs at the second hearing a different level of indeterminate pitch of which this particular drum is capable. This may

seem to be simply a typical device from the vernacular mode, that of antiphonal repetition, but the device here is so well used that we interpret it as speculation with the timbre/pitch of the gato. On the second level, she has developed a short rhythmic fragment and added a clear ending "tag", a kind of 'punch line', which gives variety that would not have been possible by just repeating the pattern, though perfectly controlled within the framework of the piece. She has grasped the vernacular and experimented with it successfully to produce music that has expressive character and form:



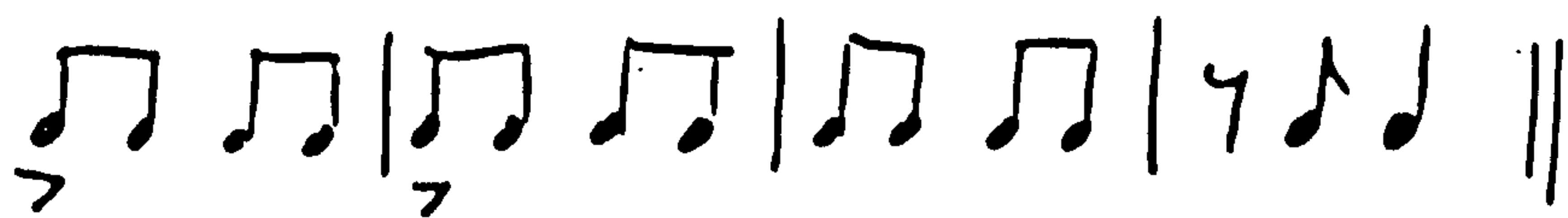
Music Example 30

The use of the unexpected is often seen at the very beginning or ending of pieces, as in the next example, a maraca piece by a girl aged 11.2:



Music Example 31

A boy aged 11.9 produced this tambour piece:



Music Example 32

Sometimes rhythmic devices of this kind are combined with melodic exploration, as in this long piece of chime bars by a girl aged 11:



Music Example 33

A song by a boy aged 11.9 shows both melodic development by the procedure of inversion and an ending emphasis by leap, which is in complete contrast to the general stepwise movement of the melody:



Music Example 34

A girl of 11.6 explores octave leaps but deliberately changes the character of the composition at the end, effectively surprising us:



Music Example 35

These examples are typical of the work of 11 year olds. In so many of their compositions there is an obvious delight in the formal possibilities of music with their potential for effective surprise.

The transition from the Imaginative Play element of the Speculative to the Idiomatic is somewhat similar to the development from Personal to Vernacular expression seen in the previous stage. There seems to be a periodic swing of focus, of psychological emphasis, between a more idiosyncratic relationship with music and the desire to conform to accepted norms. In the case of the Vernacular, the acceptance is of the most common musical procedures, involving such elements as pulse, metre, sequential patterns and phrase. With the Idiomatic, the accepted musical conventions are more strictly defined, often vigorously asserted, and usually defended with conviction. Frequently, the chosen idiom comes from the range of rock and pop music, though it is possible to find other strong commitments to a particular style or type of music between the ages of 10-15 years.

As with the Speculative phase, there is still tremendous concern for the excitement of sound materials and music's expressiveness but the Speculative mode has initiated a new concern for musical form which is to persist thereafter and this can still be seen despite the sometimes more stereotyped productions of an Idiomatic kind. Frequently, stylistical authenticity is at a premium and, in many circumstances, is linked with dress, social behaviour - complete lifestyle. In some senses children have less freedom than was the case at the Speculative level but they do have much more security and the feeling of belonging to an accepted musical convention. Teachers of young people at around this age commonly report resistance to anything but the accepted idiom and, in some cases, it seems that imaginative Speculative activity goes underground while repeated

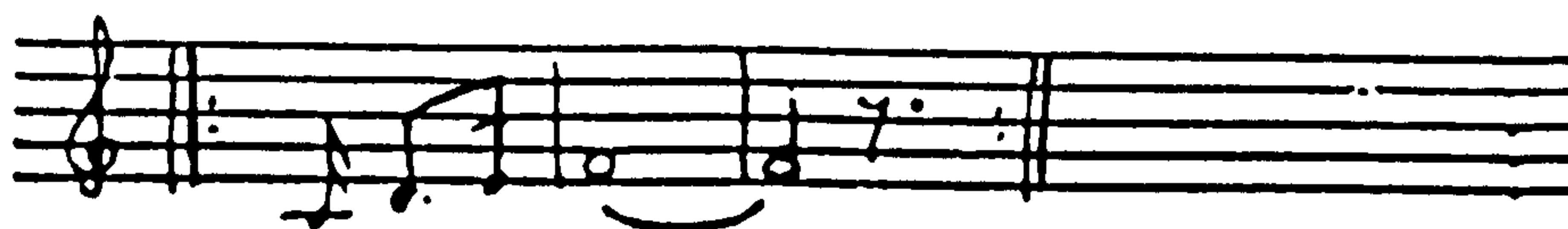
clichés dominate the musical landscape. However, speculation can be kept alive and often emerges from inside of the adopted convention. It has not been our main concern to collect compositions from children above the age of 11 or 12 but we do have some examples from the 14-15 year old age-group. Among them is a striking calypso for bass xylophone:

slight rit.

Music Example 36

Here we can see that the calypso idiom is well assimilated but with strong elements of the Speculative in the use of rests and subtle variations and in the repetitions at the end. In the strongest sense of the word, this composition is 'original', though securely based in the Idiomatic. (Later, however, we noted the similarities between this and another calypso which, however, the girl does not seem to have known.) We noted another piece, this time for piano, by a girl aged 14, based on a four-bar jazz chord-sequence, repeated four times. The second and fourth time there is figuration in the middle of the texture and a new four-bar sequence appears near the end but in the same style. There is some uncertainty and weakening of the rhythmic grip but this is still an example of speculation within an idiom.

Two more 14 year olds worked from the expressive idea of a 'Storm'. The piece though, is based on a clearly idiomatically derived motive repeated several times:



Music Example 37

Towards the middle of the composition there is a passage based on note clusters, an idea adapted from a contemporary piece they had recently heard at a concert. Following this, the motif on the

piano is resumed and fades away till only an Indian cymbal is left. Once again the element of speculation is carried forward into the Idiomatic and, in this case, musical features from two quite different traditions are deliberately juxtaposed.

META-COGNITION - from Symbolic value to Systematic development

We feel able to speculate and project a fourth level of development which occurs beyond the age of about 15 years. The emphasis here would seem to be upon what psychologists call Meta-cognition. Basically, meta-cognition is to become aware of one's own thought processes. We are using the term here in a special sense, meaning self-awareness of the processes of thought and feeling in response to music. Central to this awareness is the development of a steady and often intense commitment to what Bunting calls 'the inner emotional content of music at a personal level'. A strong sense of value, often publically declared, permeates this stage. This coincides with other developments frequently in the mid-teens: religious commitment, political affiliation, intense personal relationships and hero-worship have all been observed; we may ourselves have experienced them. People are not only intensely self-aware at this time but also are frequently articulate and wish to talk with others about their experiences and emerging value-systems. Bruner, in Towards a Theory of Instruction, puts it this way: intellectual growth involves an increasing capacity to say to oneself and others, by means of words or symbols, what one has done or what one will do. This self-accounting or self-consciousness permits the transition

from merely orderly behaviour to logical behaviour, so called. It is the process that leads to the eventual recognition of logical necessity - the so-called analytic mode of the philosophers - and takes human beings beyond empirical adaptation. (1)

Although the transition from the Idiomatic mode into this new level of awareness is gradual and frequently imperceptible, yet there is a difference between the kind of commitment we have described to a particular musical style and the first stage of meta-cognitive development which we, adapting Bunting, call the Symbolic. The shift can be seen in the tendency for individuals to go their own way and be less concerned about any general consensus. People may begin to find that music of a particular kind begins to correspond with special personal needs. The record collections of, say, 17 year olds are likely to be much more diverse than the recordings of young people at the age of 13 and before, when musical preferences seem largely determined by social consensus. It is possible to view this new commitment as the first full flowering of aesthetic appreciation, involving all previous levels of response but adding to them a strong element of self-awareness, when young people can be overwhelmed by intensity of feeling and become acutely conscious of the fast-expounding boundaries of self.

It may be that, for many, such a level of response to music is never reached and that only very few people engage with music at this level. (Whether or not this need be so is another question.)

(1) Bruner, J.S., Towards a Theory of Instruction, Harvard, Harvard University Press, 1966, p. 15.

The ultimate development within the Meta-cognitive mode we call the Systematic. There is plenty of evidence for this in the writings of musicians, especially composers. Here, the strong sense of value within meta-cognitive processes leads to the development of systematic engagement. New musical universes are rolled back and this creation, not just of music but of musical systems, can be observed either in new generative musical procedures - we may think of Schoenberg and serial technique - or of talking and writing about music in a way that borders on the philosophical - and here we might think of Hindemith, Tippett, Cage, Copland and such personal documents as the letters of Beethoven. Not only is the value of music strongly felt and declared: the field of music is expanded by new processes or perspectives.

The Spiral

Thus we can see that the processes of musical development appear to lead us through four fundamental stages.

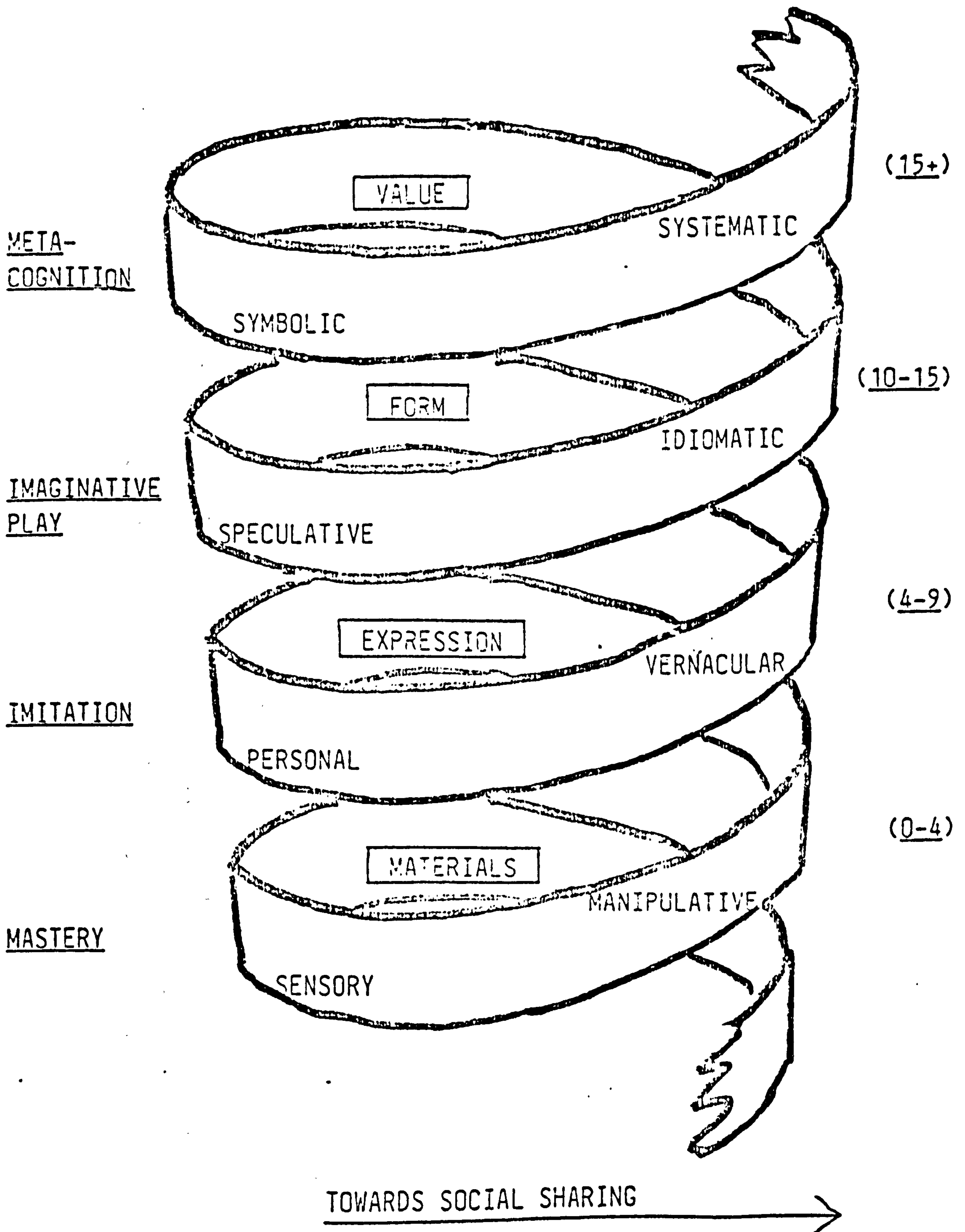
[Figure 3]

It may be helpful here to summarise each of the eight developmental modes which appear in the spiral.

Sensory

Here the child is concerned with the impressiveness of sound, especially timbre. There is also a fascination with dynamic levels, especially the extremes of loudness and softness. There is much experimentation with a variety of sound sources, conventional instru-

Figure 3



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ments being only one source amongst many. There is desire to investigate the nature of sound, so that, for example, maracas are shaken and hit together, the wood of the drum is tapped as well as the skin, various parts of the hands and fingers are used to play the tambour. At this level, though the elements are fairly unorganised, pulse is unsteady and variations of tone colour appear to have no structural or expressive significance. The activities of children up to about 3 years have this character of unpredictable sound exploration.

Manipulative

The child is acquiring increasing control of techniques involved in handling instruments and other sound sources. S/he is moving towards control of steady pulse and the interest in timbre and the other surface effects of sound shifts towards the control of particular devices, such as glissandi, scalar and intervallic patterns, trills and tremolos. Compositions at this stage tend to be long and rambling and are frequently determined by the actual physical structure of instruments themselves. Increasing control at the manipulative stage is most apparent in the work of children of 4 and 5.

Personal Expressiveness

Direct personal expression appears first and most clearly in song. In instrumental pieces it is mostly apparent through the exploitation of changes of speed and dynamic level, climaxes being created by getting faster and louder. Signs of elementary phrases (musical gestures) appear. There tends to be little structural control and the impression is frequently of spontaneous and unco-ordinated musical gestures

emanating directly from the immediate feeling-experience of the child, without a great deal of reflection.

Vernacular

Here, patterns, both melodic and rhythmic start to appear, marked by repetitions. Pieces are often shorter than in the previous stage. Expressiveness is now contained within established musical structures and, in particular, the structure of phrases, which increasingly tend to fall into two, four or eight bar units. Metre emerges more often and the variations and explorations of timbre begin to indicate some emerging sense of structure, as for example in the use of ending glissandi. Occasionally, patterns are repeated sequentially. Here children seem to have entered the first stage of conventional music making. What they do is often predictable and they have clearly absorbed into their musical vocabulary much from their previous musical experience while singing, playing and listening to others. We noticed that however the teacher may encourage the children to be experimental and work in an avant-garde style, left to themselves the children tend to gravitate towards other musical conventions. The Vernacular mode begins to appear at about the ages of 5 or 6 but is much more clearly established at 7 or 8.

Speculative

With the Vernacular fairly firmly engaged, the deliberate repetition of patterns makes way now for imaginative deviation. Surprises occur but they are not yet fully integrated into the style. Control of pulse

and of phrase, which was clearly apparent at the earlier stage, now appears less fixed as children hunt for the 'right' note or attempt to introduce a deviation which doesn't quite work. The evidence here points to much greater experimentation, a willingness to explore the structural possibilities of music and to contrast with and vary an established motif or melody. At times it appears that there is a musical formulation in the mind of the child that is not quite realised. Speculative procedures become apparent in the work of 10 year olds.

Idiomatic

Structural surprises now become more firmly integrated into a particular style. Any contrast is frequently at the end of a phrase or piece when a pattern has been clearly established from which there can be deviation. Answering phrases, variation and ending 'tags' are common. Technical, expressive and structural control begins to be established reliably over longer periods of time. There is a strong tendency to move towards what children regard as a 'grown-up' musical style or idiom. The world of popular music is especially influential here. Previous tendencies to work in a speculative way outside of the conventions of metre and melody can be suppressed. Children seek to enter recognisable musical communities. This is most apparent by the ages of 13 or 14.

Symbolic

Growing out of the Idiomatic is a strong personal identification with particular pieces of music, even turns of phrase and harmonic progressions. These appear to be abstracted from the stylistic clusters

which in the previous stage, were felt to be musically and socially important. At the Symbolic level there is a growing sense of music's affective power and a tendency to become articulate about this experience. Musical values become more idiosyncratic and commitment to music is frequently based on an intensity of experience that is felt as unique and highly significant. The Symbolic mode of experience is distinguished from previous levels by the capacity to reflect upon the experience and to relate it to growing self-awareness and developing value-systems. It seems unlikely that we shall find these meta-cognitive processes before the age of about 15.

Systematic

At the Systematic level we think of the fully-fledged musical person, capable of reflecting on his or her musical experience. There is consciousness of the stylistic principles underlying the chosen idiom(s). There is the beginning of aesthetic speculation and the possibility of creating new 'systems'. Musical composition may be based on general principles of consciously organised groups of musical materials (such as the use of the whole-tone scale, serialism, electronically generated music and so on). Musicians and others often feel the need to write and talk about these processes, often in a philosophical way. Even if they do not, we can still find evidence of a strong value commitment to music which involves expanding musical possibilities in a systematic way.

Left to Right

We can only hint at the significance of the pendulum swings from left to right and back again as the spiral is traversed, though there is clearly much that could be developed here, taking in the work of Piaget, Bruner and others. We would simply draw attention to each shift from left to right as representing a move from the more arbitrary and personal to the schematised and social. There are many fascinating theoretical and empirical roads to be trodden here. For the moment we will merely notice that the stages on the left hand side of the spiral appear to be egocentric and experimental, while those on the right seem to be dictated by conventions within which the tendency is to be more derivative and less original. Bruner writes that myths, art, ritual and the sciences are all 'expressions of this deep-lying tendency to explicate and condense, to seek steady meaning in capricious experience.'⁽¹⁾ It may be this move from capricious experience to steady meaning that is seen in our left to right swing.

There is clearly much scope here for further development, for the replication of observations and for the testing of this scheme, as pictured in the spiral. To our knowledge this is the first time that such a model has been systematically developed and it is hoped that people might use it as a profitable starting point rather than as the final word. We would also wish to draw attention to the approximate age specifications. These are to be no means taken as rigid, nor is it to be assumed that individuals may not fall outside of these general boundaries. Ages have been indicated merely to point to the relation-

(1) Op.cit. p. 31.

ship between our model and our data, to give a feeling of reality to this complex and difficult enterprise.

Figure 4 shows the observed proportion (in over 700 compositions) of the first 6 developmental modes.

[Figure 4]

Within these 745 compositions there are many examples by the same child, sometimes taped during one interview and sometimes over several interviews. There is a longitudinal element also in the years as well in that some children are included in different years; so that, for example, some of the three, four and five year old compositions will all be by the same child. The following table gives the highest levels in the spiral judged to be reached in 745 compositions across the age-range 3-11 years.

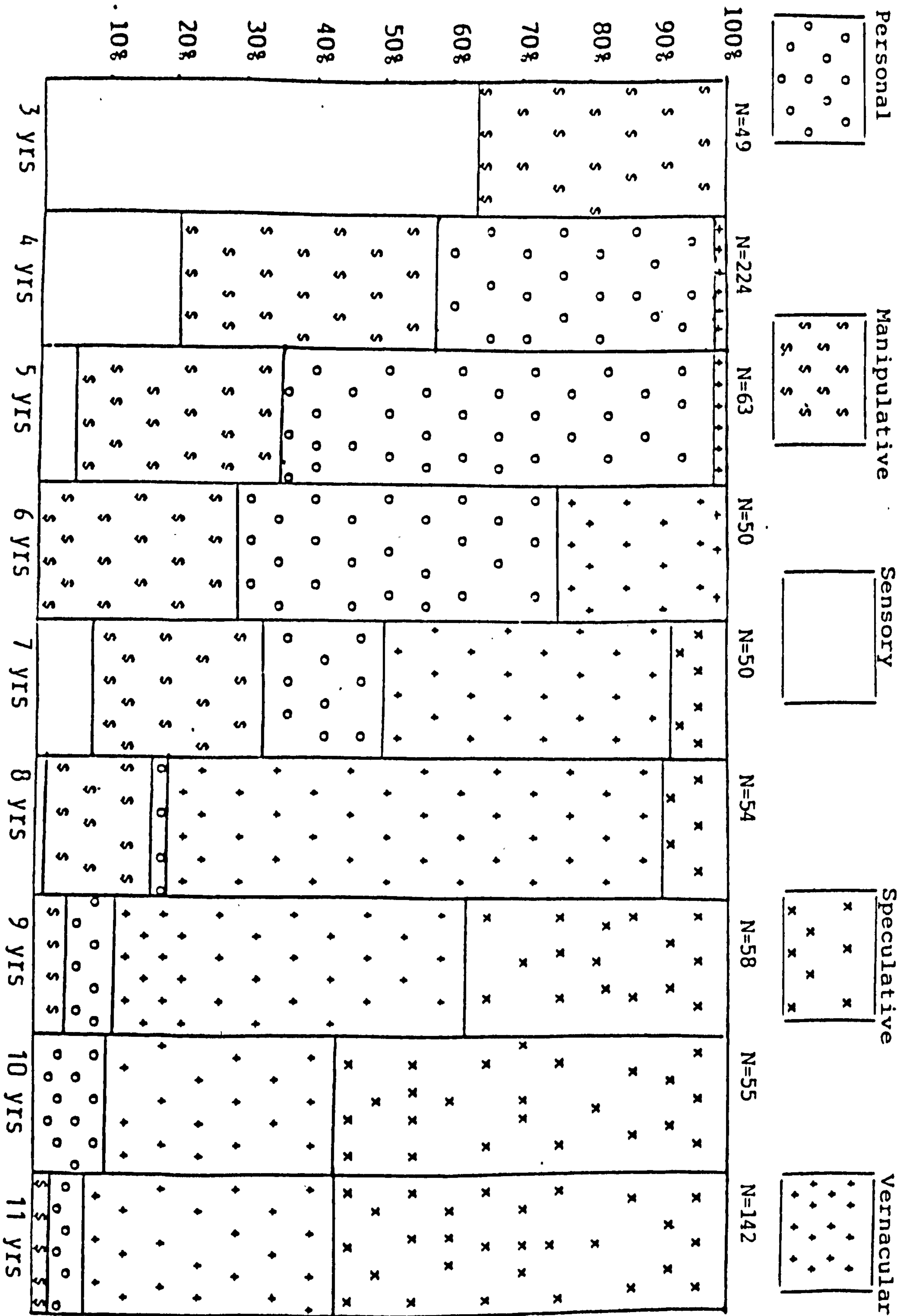
[Figure 5]

	3	4	5	6	7	8	9	10	11	
<u>Speculative</u>	0	0	0	0	4	5	22	31	68	
<u>Vernacular</u>	0	2	1	12	21	39	29	18	64	
<u>Personal</u>	0	48	40	24	9	1	4	6	6	
<u>Manipulative</u>	18	129	19	14	12	8	3	0	4	
<u>Sensory</u>	31	45	3	0	4	1	0	0	0	
Total	49	224	63	50	50	54	58	55	142	745

$$\chi^2 = 1755.3, \quad p < .001$$

This analysis is based on 745 compositions from 48 children collected over a period of four years. There is thus a longitudinal dimension to this study.

Figure 4



The development through the modes in the spiral is very clear in the development of individuals.

Summary

Thus, a musical development model is proposed based on the psychological concepts of mastery, imitation, imaginative play and meta-cognition. From this, and drawing on the literature of creativity, an interpretation of hundreds of children's compositions is undertaken. From this is developed an eight-stage spiral of development. The model has been based on a sample of children from a single school. There is much scope for work in different schools, with older pupils, and indeed in different cultures, testing out the validity of the model.

Taped examples to illustrate Chapter One (Side A)

SENSORY

- Taped example 1: A three year old girl briefly explores a triangle.
- Taped example 2: This exploration of some possibilities of a tambourine by a three year old girl was in response to the task of creating a piece on 'a lovely day in summertime'.
- Taped example 3: This is an exploration of three chime bars by a three year old girl.
- Taped example 4: This piece for xylophone using pitches at random produced by alternating the sticks is by a girl aged three years.

MANIPULATIVE

- Taped example 5: This shows a control (more or less) of steady pulse by a five year old boy. The maracas are sometimes knocked together showing his desire still to experiment with tone colour.
- Taped example 6: This is a pulse pattern with some half pulse notes, by a four year old boy.
- Taped example 7: This piece by a four year old girl on a wooden agogo consists of variations on the opening pattern which is characterised by two ending taps on the upper note of the agogo.
- Taped example 8: This is a more deliberate exploration of the xylophone by a four year old girl with some repeated notes and some alternation of the beaters.

PERSONAL

- Taped example 9: This song by a four year old girl is in response to the programmatic idea of the sun shining.
- Taped example 10: Not as exuberant as example 9, this song by a four year old boy has a definite relaxed 'summery' character.
- Taped example 11: This piece for tambour by a four year old girl rises to a climax with a crescendo and accelerando.
- Taped example 12: This maraca piece by a girl aged four starts softly as a pulse pattern with some accents and then rises to several climaxes with crescendi and decrescendi, accelerandi and ritardandi.

VERNACULAR

- Taped example 13: This piece by a seven year old girl consists of a short syncopated phrase on the tambour, repeated.
- Taped example 14: This piece for metallophone, small cymbals and Indian bells by a girl aged seven uses three notes and falls into two quite clear phrases.
- Taped example 15: This chime bar piece by a nine year old boy falls into clearly defined phrases and shows some development of melodic ideas.
- Taped example 16: This tambour piece by an eight year old girl has three repeated phrases and an ending pattern involving a scrape - a hint of the Speculative Mode.

SPECULATIVE

- Taped example 17: This gato drum piece by an eleven year old girl has a dance-like character set by the bouncy repeated phrases. The ending introduces a surprising syncopation.
- Taped example 18: This metallophone piece by a boy aged eleven shows two clearly defined phrases, the second answering the first.
- Taped example 19: This metallophone piece by an eleven year old girl has two sticks a third apart being used to provide a variation (quite conscious) on Jingle Bells.

Taped example 20: This xylophone piece by a twelve year old girl is an exploration of a syncopated rhythm with two sticks varying the distance apart.

IDIOMATIC

Taped example 21: This stylish calypso with its intentional rhythmic surprises and uses of rests is by a fifteen year old girl. It is similar to an existing one which the composer claims she had not heard.

Taped example 22: This piano piece by a fourteen year old girl has variations on a jazz chord sequence, a new sequence being introduced at the end.

Taped example 23: This piece for piano and percussion entitled The Storm shows a repeated "riff" being used as a basis for the outer sections, while the middle part has contrasting note clusters.

Taped example 24: This carol by a fifteen year old girl draws on the style of music that she is familiar within her church.

Note: These items were recorded under normal school conditions, hence the extraneous sounds.

CHAPTER II

CREATIVITY AND THE DEVELOPMENTAL SPIRAL

This Chapter examines the links between the two parts of the thesis.

Definitions of Creativity

The version of creativity as a process of self realisation appears in the developmental spiral which shows in which mode (with a possible age) the child becomes concerned with self expression and how this becomes refined into the musical gestures common in our society. This process of refinement may be linked to the ordering of personal experience raised by some writers. The linking of the idea of increasing freedom in creativity is taken up in that as a child develops through the various modes of the spiral s/he becomes increasingly free to operate in variety of modes, so that the fully fledged composer has eight modes of operation open to him/her whereas the three year old child can operate in only one of these. If the second, more problem-centred view of creativity is taken, there is an idea that the creator is working with materials already existing. The child is acquiring the musical gestures common in our society as s/he develops and s/he will use these in later work, albeit in new ways. Thus in those modes of the spiral that are more concerned with acquiring the patterns of the culture the child may be operating in this way - using society's clichés as the basis for his/her work. Indeed this links with all the work on the imagination and also with memory especially auditory memory. The possibility of these being combined in new ways is

implicit in the Speculative Mode. The advent of affective considerations is seen in the Personal Mode concerned with self expression and this mode is subsumed into the ensuing modes. The increasing capacity of the child to imagine what is not is clearly represented in the Speculative Mode in which it is clear that s/he is able to imagine what might have been (based on his/her work in the Vernacular Mode) and deviate from it. Curiosity is very apparent in the Sensory Mode: 'What sound can it make?' is the question of paramount importance to the pre-school child and indeed, it remains the basis of a constant search for all children and indeed for established composers.

The notion of originality in the product-centred approach whether it is regarded as new to the composer or new to society is also evident in the spiral, for as the child passes through the modes in his/her musical development each stage is new to him/her. The idea of being new to society is present in the Speculative Mode in which the child takes established musical gestures and deliberately deviates from them. However, really new developments in composition techniques are reserved for the Systematic Mode of the fully-fledged composer. However, Bruner's term 'effective' surprise could certainly be applied to children's work in the Speculative Mode. Meyer⁽¹⁾ in defining 'greatness' in musical products even differentiates between associative - characterising which is clearly seen in the area of imitation and its emphasis on expression and syntactical relationships which are the concern of imaginative play with its interest in form.

The importance of the creator of the products is clearly echoed in the fact that it is the personal musical development of the child,

(1) Meyer, L., Music - The Arts and Ideas, Chicago, University of Chicago Press, 1967.

the creator of the compositions that we are trying to plot. The freedom stressed by writers on the characteristics of the creative person has already been linked with the spiral. Hilgard⁽¹⁾ refers to two qualities that he added to Guilford's factors - 'aesthetic sensitivity' a deep-seated preference for and appreciation of elegance of form and thought, of harmony wrought from complexity, and of style as a medium of expression and 'a sense of destiny' which includes something of resoluteness and certainty of one's worth and validity of one's own future. Such qualities are characteristic of the Symbolic Mode. The idea that a creative person may be creative in any sphere is reflected in the fact that Irving Taylor's⁽²⁾ model for creative development was based on the visual arts and has similarities with the modes in the spiral (as does Cottle's).⁽³⁾ On the other hand experience of the medium is vital, as indeed the starting point of the spiral is the appreciation of the qualities of sound leading to an ability to manipulate it. This will not happen without contact with sound sources.

The process-centred definitions are reflected in the different modes of operating. Each mode is a particular way of creating and the higher the progress through the spiral the greater the number of modes at the disposal of the creator; thus the spiral is also an attempt to analyse the way in which the mature composer works. The element of discovery in the process is present in the idea that

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- (1) Hilgard, E.P., Creativity in Problem-Solving, in Anderson, H. (ed.), Creativity and its Cultivation, New York, Harper Row, 1958, pp. 182 - 180.
 - (2) Taylor, I.A., The Nature of the Creative Process, in Smith, P. (ed.), Creativity: An Examination of the Creative Process, New York, Hastings House, 1959, pp. 54 - 61.
 - (3) Cottle, T.J., A Simple Change in Creativity, Journal of Creative Behaviour, Vol.7, No.3, (Third Quarter), 1973, pp. 161 - 4.

progress through the various modes demands contact with the medium and is seen quite clearly in Yorke Trotter's⁽¹⁾ work with children. Koestler's⁽²⁾ idea of the creative act being the bringing together of two previously unconnected ideas, his 'bisociation', is clearly linked with the Speculative Mode in which the child consciously deviates from the accepted norm.

The Processes of Creativity

The relationship between music and emotive life is seen in the advent of the Personal Mode. Thus it can be seen quite clearly at which level this link is forged. The progress from the Personal to the Vernacular describes the embedding of this personal expression in established musical gestures (even clichés). It is possible also to link Wallas's four fold division of the creative process with the spiral (although this may be pushing the model too far). The materials phase (Sensory and Manipulative) may be linked to the Preparation Stage in that it requires a trying out of the materials and establishing control over them. The Incubation phase is especially evident in the Expression phase, the self expression of the Personal Mode being rooted in the unconscious or preconscious processes described in this phase. The moment of Illumination has much in common with the Speculative Mode and its deliberate combining of unlikely elements. The Verification phase is in the area of meta-cognition, awareness of the processes

(1) Trotter, Y., Principles of Musicianship, London, Bosworth and Co. Ltd, Published at the beginning of the century.

(2) Koestler, A., The Act of Creation, London, Hutchinson, 1964.

involved and of the effect the piece will have on an audience. If this is a valid link, it may be true to say the children stop short in the early stages of the creative process. It would also mean that they gradually acquire the ability to progress further through them as they develop. The role of imagination and memory in the process is clear, for in all the modes on the right hand side of the spiral a bank of sound experiences or patterns are being built up on which the older person will draw. Born⁽¹⁾ calls this a 'culture conscience'.

This passage about Jung shows the idea being developed further, the individual unconscious holding more sway on the left hand modes and the collective unconscious on the right:

Some of the unconscious appeal of music will be to the levels of the personal unconscious or individual unconscious (feelings and emotions which have been forgotten or repressed from the conscious mind) but some of the appeal will be to deeper levels, the levels of common human experience and innate emotions which some writers would call instinct, and which Jung called the collective unconscious. Jung defines it as follows: 'While the personal unconscious is made up essentially of contents which have at one time been conscious but which have disappeared from consciousness through having been forgotten or repressed, the contents of the collective unconscious have never been in consciousness, but owe their existence exclusively to heredity. Whereas the personal unconscious consists for the most part of complexes, the content of the collective unconscious is made up essentially of archetypes. (2)

The spiral model also contains in it the notion that in the adult artist the modes are not separate but that, for example, in work on a

(1) Born, W., The Unconscious Process in Artistic Creation, Journal of Clinical Psycho-Pathology and Psycho-Therapy VII, 1945, pp. 235 - 72.

(2) McLaughlin, T., Music and Communication, London, Faber and Faber, 1970, p. 103.

composition a composer may need repeatedly to return to the Sensory and Manipulative Modes to generate new ideas. Thus there may be two ways of regarding the spiral, one as a pattern of overall development and one as a model in which various modes are used at different times. Thus the young child may have visited the Form phase of the spiral before s/he goes to school but the main age for this interest is 10-14. The creative process may be regarded similarly, thus bringing together those who view it as a series of more or less discrete stages and those who see the artist's interaction with the chosen medium being rather more fluid.

The importance of playfulness is clearly seen in the fact that it is on Swanwick's development of Piaget's analysis of play that the spiral model is built-on the basis of Mastery, Imitation, Imaginative Play, to which is added Meta-cognition. Lieberman's analysis of the stages of play agrees in a large degree with Piaget's. Indeed this is seen clearly in this quotation from Woodworth about the inventor and the capacity of the mature inventor to return to these childish processes - in other words to operate in all the modes of the spiral:

The human enterprise of exploration runs the gamut from simple exploratory movements of the sense organs in looking and listening, to the elaborate scientific procedure followed in testing hypotheses and discovering the laws of nature. Inventive or manipulative activity runs a similar gamut from the child's play with his toys to the creation of a work of art, the designing of a work of engineering, the invention of a new machine, or the organisation of a new government. The distinction between the two lines of activity is that exploration seeks what is there, and manipulation changes it to something else. Exploration

seeks the facts as they exist, while invention modifies or rearranges the facts. The two enterprises go hand in hand, however, since facts must be known to be manipulated, while on the other hand manipulation of an object brings to light facts about it that could never be discovered by simple examination.

Beginning with grasping, turning, pushing, pulling, shaking and dropping of objects, the child's manipulation develops in several directions. One line of development leads to manual skill. The child learns to manage his toys better.

A second line of development is in the direction of constructiveness. Taking things apart and putting them together, building blocks, assembling dolls and toy animals into 'families' or 'parties,' setting table or arranging toy chairs in a room, are examples of this style of manipulation, which calls less for manual dexterity than for seeing ways in which objects can be rearranged.

Make-believe is a third direction followed in the development of manipulation. The little boy puts together a row of blocks and pushes it along the floor, asserting that it is a train of cars. The little girl lays her doll carefully in its bed, saying 'My baby's sick; that big dog did bite him.' This might be spoken as 'manipulating things according to the meanings attached to them' the blocks being treated as cars, and the doll as a sick baby.

Perhaps a little later than make-believe to make its appearance in the child is story-telling, the fourth type of manipulation. Where in make-believe he has an actual object to manipulate according to the meaning attached to it, in story-telling he simply talks about persons and things and makes them perform in his story.⁽¹⁾

(1) Woodworth, R.S., Psychology, New York, Holt, 1921, pp. 481 - 482.

The importance of both convergent and divergent thinking in the process is seen in the swing from left to right. The modes on the left side may be seen as requiring more divergent thought, while those on the right more convergent. The tension between nature and nurture is reflected in the fact that although these are the modes that all children were observed to pass through, it is likely they will not do so unless they are given a chance to explore sound making materials. Also the biological aspects of creativity - the nature - are seen in the modes on the left whereas those on the right are more concerned with the cultural aspects - the nurture.

Children and the Creative Process

Many writers like Glynne-Jones, Torrance, Tait, Moog and Ross have grappled with the problem and their findings often agree with those of the writer. The spiral explains the so-called slumps in creativity mentioned by several writers. These are really declines in apparent originality and as can be seen they coincide with swings to the right hand side of the spiral and the acquisition of cultural norms which may seem like resorting to cliché after the fresh, idiosyncratic modes of the left side. This is particularly true of the swing from the Personal to the Vernacular and it is at 9 that Torrance sees the first big slump in creativity. Far from being a step backwards it is really a step forwards in order to reach higher levels of originality at a later stage. It shows the weakness in creativity tests in examining what is essentially a developmental process not a static phenomenon. The second slump at 11 coincides with the swing towards the grasp of a particular idiom. Dudek's use of the word

expressiveness instead of creativity ties in with this, for it is this quality that characterises the left hand side of the spiral, the pieces that to some minds might appear to be more unusual and more original. It is interesting too that Piaget claimed that the advent of a new cognitive action caused an increase in egocentrism⁽¹⁾, for it is at the point where the child has grasped a cultural norm that s/he starts again to experiment with that pattern and on that pattern as a base. At first these efforts are egocentric and unfocused and unformalised.

The role of skills is also apparent. These are clearer on the right hand side of spiral which is very much about their acquisition: for example, the ability to hold a steady pulse in the Manipulative Mode, in which the child might be given all sorts of activities to improve his/her capacity to do this. Other skills are needed in the Vernacular Mode, among them phrasing, metre and the ability to combine sounds. Again further activities can be provided to build them up. In the Idiomatic Mode, often a grasp of chord patterns is required and activities to develop this can be initiated. The process is essentially a balance between more idiosyncratic pieces which some writers would regard as more 'creative' and pieces adopting the cultural norms of our society. The importance of motor patterns in the development is seen in the Materials Phase (Sensory and Manipulative) in which the techniques are all motor. It is in this phase also that the child builds up the bank of sounds that will provide the basis for tonal imagery. Maxwell Davies's work in Cirencester and his advocacy of

(1) Referred to in Dudek, S.Z. Creativity in Young Children - Attitude or Ability, Journal of Creative Behaviour, Vol.8, No.4 (4th quarter), 1974, pp. 282 - 92.

still teaching the chords of I, IV, and V to his teenage students links with the developmental swing to the Idiomatic with its interest in chord sequences in particular.

Seeing musical development in this way may also enable teachers to develop the musical potential of every pupil. It is clear that most people will be able to pass through the modes lower in the spiral even if few will reach the level of the Systematic. Indeed it should give teachers a model up they can use to guide and chart that progress (see Chapter Three).

The notion of the mature composer being free to experiment because he has grasped cultural norms in a way the less experienced has not, is seen in the progress from right to left on the spiral; for having acquired cultural norms on the right the child is then free to experiment with them in the more egocentric pieces on the left of the spiral. It also shows the dichotomy between being new to society and being new to the child. Each swing of the spiral marks a phase that is new to the child but it is really only in the Systematic Mode that something new to society is created. The spiral can also give teachers a way of evaluating children's creative products. In it also can be seen the gradual handing over the evaluative role to the pupil as the pupil reaches the Meta-cognitive Level.

Creativity and Education

Various music educators have emphasized different stages in the process. Justine Ward, for example, even referred to children manipulating sound like building blocks. The links with listening and performing are also clear in the spiral for the progress through

the right hand modes is clearly influenced by both. Through listening the child absorbs the patterns of musical culture and through performing he grasps the technical skills needed to play them. All these clearly have a bearing on his creative work. The ability to play a chordal instrument for example, is often, of considerable help to the adolescent in the Idiomatic Mode, and a variety of activities encouraging the grasp of a steady beat is clearly helpful to the child in the Manipulative Mode. Most writers on creative music making seem to have a type of composition in mind they call creative (often undefined). They do not entirely agree with one another what this is, but many views have links with the Speculative Mode. They say that other activities are preparatory to this and in saying this, they seem to endorse this developmental spiral. The spiral also shows the need for the teacher to strike a balance between freedom and authority. S/he also needs to trust that given sound experiences the child will pass through the various modes. The spiral can thus be a guide and a chart (see Chapter Three).

Indeed various school of thought about music education have tended to concentrate on one or other side of the spiral. The 'creative music making' school of thought as found in the writings of Paynter, for example, have encouraged the more unusual, obviously original, more idiosyncratic compositions and have thus emphasized the left hand side of the spiral. Other more skill orientated courses like Kodaly, Orff and instrumental teaching 'methods' like Robert Pace's Piano Course⁽¹⁾ have focused on the right hand side. It is

(1) Pace, R., Piano Course, New York, Lee Robert Music Publications, Inc., 1982.

only when both poles are embraced that a curriculum can be said to be balanced and the children's personal development fully encouraged.

Summary

The spiral encompasses many of the issues discussed in Part One and makes clear how several apparently conflicting points of view can be contained in one model. Its spiral structure is not one of discrete stages each left behind when a new one is reached but of modes to which more mature artists can return freely. Thus within the model are embraced among other issues: the nature of imagination the role of memory, the issue of originality, the importance of playfulness, the necessity for skills, the apparent slumps in creativity and the nature/nurture problem. There is scope for further research into all these areas in the light of the spiral.

CHAPTER III

CURRICULUM IMPLICATIONS AND SUGGESTIONS

FOR FURTHER RESEARCH

Introduction

What has been set out in the two volumes of this thesis is an attempt at a map of musical development. It tries to bring together theory and practice in a new way. The theory is rooted in the literature on creativity and the work of Swanwick, Moog, Piaget, Paynter and others, while the practice is drawn from the observation of children's work and the experience of practitioners. The spiral model set out in Chapter One of Part Two would therefore seem to be helpful and reasonably trustworthy. Assuming that such a map may help us to understand children's musical development we have to decide whether or not to follow or lead the sequence in formal education, working with, rather than against, developmental processes. The implications move from areas close to the concerns of the original research to those further away and more speculative. So those involving composing in the curriculum, individual development in composition, individual and group composition, the organisation of a single project and the role of the teacher are areas relatively close to that of the original research area, while its application to the areas of performance and audition and the light it throws on the relationship between feeling, creativity and music are more speculative. The order of the suggestions for future research follow a similar pattern. In these are indicated also the limitations of the practical work on which the thesis is based and ways of using the findings to explore other areas.

Implications for Composing in the Curriculum

The spiral model has a wide variety of possible implications in terms of planning the general curriculum both in the type of activity and the resources that should be made available at various ages. As has been suggested in Chapter Two of Part Two various schemes devised by music educators appear to have emphasized one or other side of the spiral. Those in charge of music education may have to keep both sides in mind; and examine current trends in music education to see if the balance is being kept - to prevent the support of socially accepted musical conventions degenerating for example, into unimaginative exercises in aural dictation and to guard against the more idiosyncratic compositions dissolving into chaos. This is the task of the individual teacher too. The freshness and spontaneity of the left hand modes need to be kept alive in the more conventional pieces of the right hand modes. The order of the right hand modes is needed in the more chaotic explorations of the left hand modes. (See Chapter One of Part Two). Ethnomusico-logical studies may show that initiation into musical activity follows similar patterns in other parts of the world.

At the level of the pre-school child (and indeed in the early years of school if such experience has not been made available earlier) the concern is with the Materials Level - the Sensory moving to the Manipulative. In the classroom there should be as wide a variety of actual sound sources, instruments and other potentially sound-making equipment that are fairly easy to handle. Children in their early years are fascinated by shakers of different materials, varying both in terms of the container and the filling. Maracas from Latin America can be explored alongside wicker work shakers from Africa and temple blocks

from China with the rectangular ones manufactured in Britain. The children will wonder at the variety of colours and shapes of these as well as, and related to, their timbre. Shakers which they have made themselves can be compared with these. Temple bells and Indian cymbals have an especial magic. A five year old exploring these said: 'It changes!' 'Does it?' I replied and we all closed our eyes and listened. Sure enough, at the very end of the sound there was a slight change in pitch or timbre, I am not quite sure which. It will be the task of the teacher at this level to provide structures in which such timbre explorations can take place. The song with spaces for improvisatory activity is one such and the game is another. Examples of these can be found in Appendix One.

With increasing skill the children become able to hold a pulse with the instruments at first at their own and then with others. They will then share a common pulse and will, at this stage, want for example, to learn how to manipulate a shaker, hold a drum stick, and operate two sticks rhythmically on a pitched percussion instrument.

This mode will lead with older children (possible 5 or 6 to 7 or 8 year olds) to some idea of the expressive power of music. The soothing nature of lullabies around the world can be compared and the rousing character of marches. Moving to music seems very likely to aid this development and research currently being carried on by Dorothy Taylor at the London University Institute of Education may help us to understand this further. Such groupings of material from a variety of sources according to expressive character are apparent in the EEC Research Project in Intercultural Education, which is available at the London University Institute of Education. In this mode pieces of

clear expressive character can be linked with visual and dramatic ideas. Examples of such projects can be found in Appendix One. Words and music may be linked. This can be done either in the area of song or through the creation of impressionistic sounds around ideas from a poem.

Through such activities the child will be acquiring a grasp of the Vernacular, the child will be entering the conventions of the musical world. In this mode such activities as those found in the educational work of Kodaly may help the child in grasping these. Ostinati may form the basis of compositions and it is appropriate to explore the concept of phrase as described in activities in Appendix One. Children may well want to learn to play a melodic instrument in this mode and it is not by chance that many schools introduce the descant recorder around this time. This will usually involve some experience of traditional Western European classical notation. This is useful for composition activities as the compositions in this mode are relatively short and repetitive. Classes can also look at the construction of melodies and finished and unfinished endings to phrases. Such common patterns at AABA may be explored; but here we are moving towards the next level of the spiral model.

With children of about 9 and 10 there will be an increasing concern with form. In Chapter One of Part Two we have already seen in the children's own compositions the emergence of musical surprise and this can be at any level in terms of timbre, in the establishing of a pulse which is then abandoned, in a contrast in the expressive character or the juxtaposition of different musical phrases. Examples of such contrasts can be seen in the projects in Appendix One.

Variation form is also of interest in this mode as is seen in the example based on Jingle Bells (in on Side A of the tape). This may lead to a look at ways of ornamenting a melody across the world and in musical history; or indeed the study of ways of extending and developing melodies through such devices as sequences; and here again the pupils will be using patterns acquired in the Manipulative Mode to formal ends and within formal structures. Modulation could be introduced but here, as at the end of the transition from Vernacular to Speculative there is a move to the next mode.

With the secondary pupil the Idiomatic Mode assumes importance as the pupil seeks to enter the wider musical community. There is often a concern for distinctive chord sequences here and this can be found in a variety of traditions. The twelve-bar blues is a popular example and there are many more. The old Ordinary Level exams concentrated on working within those harmonic idioms commonly found in Western European classical music from 1750-1830. In children's work this interest in harmony is first seen in the doubling of a melodic line with a line a third below using two sticks on a pitched percussion instrument; but this may be due to the inability of pupils to play a chordal instrument. To represent the range of idioms necessary requires the employment of peripatetic instrumental teachers in the secondary school. Electronic keyboards offer the possibility of controlling chord sequences with minimum technical skill and would account for their popularity with pupils of this age. Such projects as the creation of songs as over chord sequences as found in Appendix One are appropriate in this mode.

Exciting though such projects can be, many questions are raised by the advent of the Idiomatic. In many cultures this would be accompanied

by some sense of having arrived into some adult world. In the area of performance we seem to have some clear examples of ways of creating this sense of arrival. In parts of Africa it was certain stage in the apprenticeship of a drummer to his master; in the English Cathedral Music tradition it is the ribbons and medals of the Royal and medals of the Royal School of Church Music and in the Western European classical music tradition the graded examinations of the Associated Board of the Royal Schools of Music.

But what of composing? And what of our schools? Into which tradition are we initiating pupils? At this stage there are so many now to choose from that the choice can be staggering in its width. Is it to be those of worlds of pop, jazz, folk, Western European classical music or the varying traditions of every kind found throughout the world? One of the GCSE syllabuses under the heading Subject Content runs.

Candidates will also be expected to have experience of the following: there then follows a positive plethora of ensembles, forms, devices, musical effects, instrumental and vocal effects concluding with:

Genres: oratorio and opera (recitative, aria, and chorus), concerto grosso, trio sonata and suite, symphony, quartet, piano sonata, concerto, programme music (tone poems etc.), lieder, waltz, march, general familiarity with modern popular trends, music from Africa, Afro-Caribbean and Asian traditions.¹

This whole content begs many questions but even the last phrase is problematic: Music from Africa, Afro-Caribbean and Asian traditions.

1. Midland Examining Group, General Certificate of Secondary Education Examination Syllabus, 1988, Reprinted 1986, p. 5 .

Which part of these? Which tradition? High art? Or folk? A teacher who had been in an advisory role in music teaching in Uganda some 10 years ago said that the tradition varied from village to village. (And this is not an exclusively African phenomenon, for in my own neighbourhood a local pop group had its group of local followers and its own distinctive style; and it must be remembered that the Beatles first started in Liverpool. The mass media now have the capacity to turn a local culture into a wider one. This almost takes the choice out of the hands of teachers and formal education. Or does it? Has the spiral model, deeply rooted in human development and the nature of music anything to say in these areas? This question will be addressed again later.)

And what of music history? The above list implies a history of music in Europe. Is there none in Africa, the Caribbean and Asia? The above lists seem in Europe to go back to the Baroque but I expect there will be pressure to include the whole areas of the Renaissance and the Middle Ages which is now being brought alive for us in a new way by the reconstruction of old instruments. The twentieth century Western European avant garde have themselves created a variety of systems. What of them?

Are these the traditions that our secondary pupils want to enter? Is their desire not to enter the world of popular culture? But here also the traditions diverge and codify themselves into separate systems and there will also be among the pupils those who have already trodden along other roads and be following other paths. In my own classroom pupils who embrace the idioms of reggae rub shoulders with classical pianists and a folk guitarist into Country and Western composes

alongside an accomplished satirist brought up on the world of Flanders and Swann. A girl in a local Baptist church composes religious songs in the style of contemporary religious folk and a jazz singer improvises around melodies from that culture. These adolescents need to have a feel of getting somewhere and are seeking experience within an idiom that they have chosen.

But which are music educators to choose? How many can a single teacher have sufficient expertise in to enable his/her pupils to feel that they are arriving in an adult world? A friend of mine who has much experience in the area of interculturalism and has organised a multi-cultural festival in London for many years suggested that two cultures were about as much as a single person could hope to embrace. In the Idiomatic Mode the conventions of a style to be grasped are many and relatively complex and it may be that one person can only have expertise in two of these. But which two are to be chosen? What criteria do we use to make this choice? But if we do not choose, adolescents may well be so deprived of a sense of arrival in what they seek that as a result they reject what is offered as being of no value. The use of visiting teachers and people in the community is vital here.

And here the upper level of the spiral model is approached - the Meta-cognitive with its notion of value. There is little in my research to help here. But pupils do become more aware of how to use the experience of lower levels to make music¹ "mirror the flow of feeling within them". They become aware of their own thoughts and processes and are able to understand and talk about them but there is much work to be done here.

1. Bunting, R., The Common Language of Music, Music in the Secondary School Curriculum, Working Paper 6, Schools Council, York University, 1977.

In all this discussion of the implications of the spiral model for the development of composing in the general curriculum there is a tension between the awareness of the developmental needs of a group of pupils and available resources and expertise and above all how to provide for diversity within the formal structure of an institution.

Implications for Individual Development in Composition

Although education is organised in terms of classes, people develop as individuals. If the teacher can keep in mind the next most likely stage in development s/he is more likely to suggest the most likely possibility, to ask the relevant question or instigate a suitable activity.

For example the move from the Sensory to the Manipulative can be seen in this tambour piece by a three year old which is at first:

Music Example 38



On repeat it becomes:

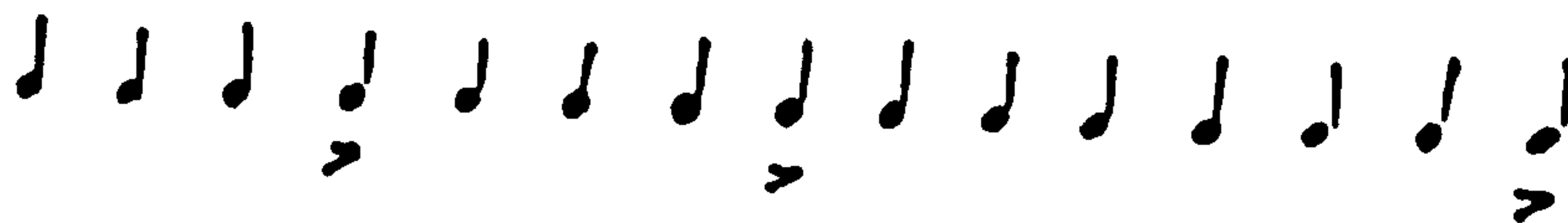
Music Example 39



Here all the pupil needed was a chance to repeat it. The teacher might have helped the pupil with the technique or possibly introduced a stick for the hand.

The move from the Manipulative into the Personal is seen in this maraca piece by a four year old which starts as a pulse pattern:

Music Example 40



and then continues with irregular accents and four crescendi and accelerandi with a big climax at the end. Here the teacher might talk about the sense of excitement generated by the changes in speed and dynamics and illustrate it with examples in the area of audition and performance.

The move from Personal to Vernacular is seen in a move towards the world of musical cliché. This is a xylophone piece by a seven year old:

Music Example 41

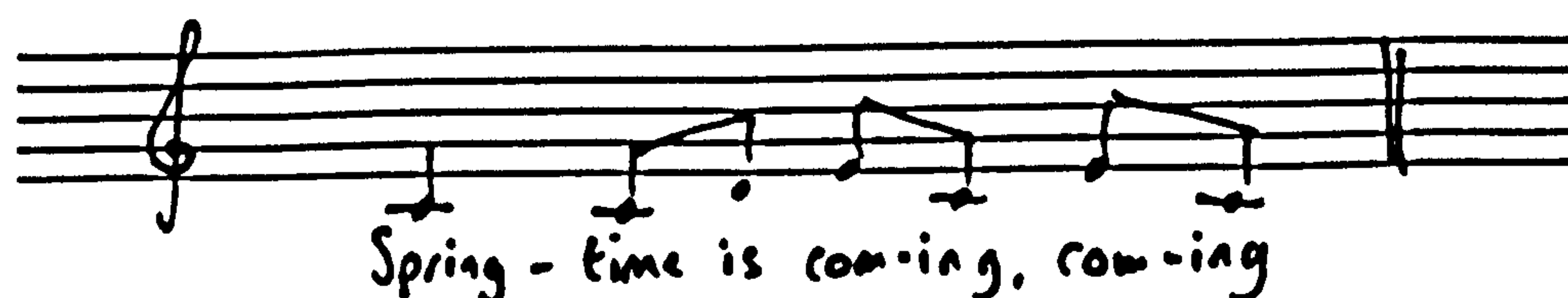


It starts off with a sense of phrase and metre and becomes more disorganised in the middle. The child moving from the experiments in speed that characterise the Personal Mode might be encouraged to repeat the idea and make the first part match the first. The teacher may suggest ways of doing this. S/he may say: "This is the way I might do it. Do you like it?" Musical examples in the area of audition and performance that use similar patterns might be introduced.

The move from Vernacular to Speculative may be done by suggesting extensions to the material the pupil offers. A child may offer the

phrase:

Music Example 42



The teacher might encourage him/her to add another phrase. This was the one provided by one girl:

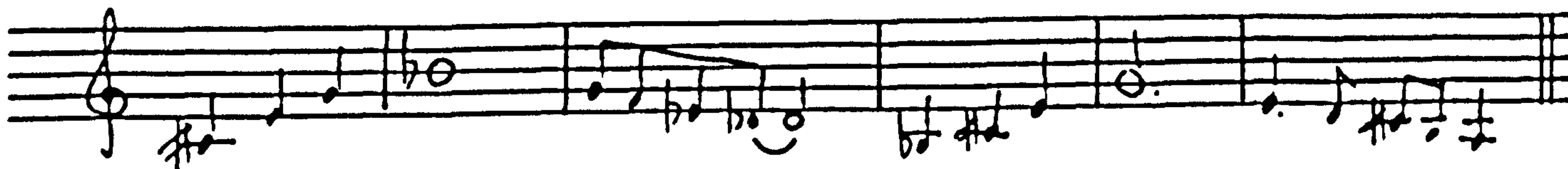
Music Example 43



In the final piece the first phrase was sung twice, then the second phrase, then the first phrase was repeated. She had created an AABA melody.

At present I am recording the work of some of the pupils in the original sample as they pass through the secondary school. This should yield some insights into the Idiomatic Mode especially harmonic and stylistic preferences.

It is important to keep a record of a child's progress. For example this chromatic melody we noted earlier by an 11 year old:

Music Example 44

would be differently regarded if it was by a six year old. At that stage, when it might be regarded as Personal, the teacher would not be surprised if she later produced more conventional melodies. The teacher may feel that this trend should be encouraged or s/he may take the opportunity to keep the spontaneity of the Personal Mode alive. However, as it is the product of a ten year old who is known to have produced more conventionally shaped tunes in previous years, the aim will be to encourage the integration of these Speculative elements into her individual style. Longitudinal studies in the future might shed more light here.

Another question is also raised. Does the process in reflecting and achieving a result that the child finds satisfying take longer as the child gets older, as s/he has a greater experience in earlier modes of the spiral and so has more possibilities available? Answers to this question may have implications for the way in which this work is organised.

Individual and Group Composition

Although the teacher has to keep records of the progress of individuals s/he also has to set up structures for composition activity

and make decisions about whether it should be in groups, pairs or individually and also what size the groups should be.

Some structures for this have already been provided. In my experience the younger the child the smaller the group should be. It is also true that the swing to the right hand side of the spiral may well suggest more group work activities. In my own work in the Manipulative Mode one child holds the pulse while the other improvises. In the Vernacular Mode there are many ostinato pieces. In the Idiomatic Mode numbers of people are often needed to create the more complex textures required.

In the American scientific literature on creativity in Part One it was noted that more ideas are generated by group activity. It is possibly true that group compositions will have a greater element of contrast than the work of individuals. Some pupils seem to have little problem in generating ideas whereas others need constant help, and guidance and encouragement (which may reflect the individual stage of development.)

This is a dilemma faced by many teachers of composition as part of the GCSE exam when many boards require individual composition. It may reflect the dichotomy between the demands of the exam and the needs of the pupils in the Idiomatic Mode.

The Organisation of an Individual Project

While the spiral model is an overall plan of musical development in composition it may very well be used as a guide when the teacher starts up a certain activity or introduces a new musical procedure or idea. Some projects are suggested in Appendix One.

The lesson on Side B of the tape will serve to illustrate this kind of sequence in more detail. It is a lesson with a group of six children all aged 9 and of mixed racial backgrounds. They are from a South London primary school and have been having one music lesson a week with the researcher since the age of four. Some of them have group lessons on an instrument in addition to this.

The lesson opens with the children getting together the instruments they have chosen. Each child has chosen two and there is a lot of experimenting individually - an example of the Sensory and Manipulative Modes of working. The children are asked to invent a pattern on their instrument/s. Each child is then asked to turn to play his/her contribution. Claire starts on the glockenspiel with this chromatic pattern:

Music Example 45



This could be regarded as Personal or Speculative. I favour Speculative as it does have a sense of shape and phrasing. (Claire's previous work would confirm this impression.)

Next comes Amber's contribution. She produces this short phrase on the glockenspiel:

Music Example 46



This is a clear example of the Vernacular, its shortness being typical.

There is also some discussion about whether it is based on the theme from the film Close Encounters of the Third Kind. Amber claims that it isn't, but this use of fragments from or based on (consciously or unconsciously) other people's work is a characteristic of this mode.

Jacqueline then produces a contribution for bass metallophone:

Music Example 47



On the repeat she changes the rhythm:

Music Example 48



It is a good example of the Speculative Mode with its emphasis rhythmically on the surprising Bb in the middle.

Jonathan too on the chromatic box of an alto metallophone produces this Speculative contribution, one phrase being answered by another which rounds it off:

Music Example 49

Kevin on the bass metallophone produces a more conventional contribution:

Music Example 50

He too changes it on the repeat to:

Music Example 51

The use of scales is a feature of the Vernacular Mode and the contribution is almost like Jacqueline's with the Speculative element taken out.

Karel then performs a much less shaped contribution on the drum. It has real character and would seem to be an example of the Personal Mode:

Music Example 52



Karel and Jonathan then ask to work together. They produce a piece based on *Ostinati*, an example of the use of the Vernacular in organisation.

There follows some discussion of Jacqueline's contribution. I highlight the Speculative element in it. There is some discussion of its 'jazzy' feel - an example of the beginning of Idiomatic interest.

I then suggest a way of putting the contributions together to form a piece. A rondo structure is suggested, an example of a Vernacular Mode of organisation. I suggest that the more unusual sections should come near the end, the Speculative element often being best introduced as the climax to a piece.

There is some discussion of Jonathan's piece having a Chinese sound (He had only the black notes to work with.) - an example of Idiomatic concerns. Claire's piece is also discussed, in particular its expressive character in phrases like 'It's like a horror film'. This concern with expressive character is characteristic of the Personal.

A performance of the whole piece is started but is stopped because Jacqueline only plays half her contribution. There is some discussion about how much she should play and the whole is decided on. Again there is a reference to the Chinese sound of Jonathan's piece.

A complete performance follows. In this Karel and Jonathan on drum and cymbal have reworked their section with the cymbal playing an ostinato while the drum improvises an original pattern, very Speculative in its use of rests.

The group then had a chance to listen to the performance. The comments that follow lead to Amber practising her part, an example of having to return to the Manipulative to achieve a good performance. There is some discussion of the drum and cymbal pieces. It is likened to a conversation. This appearance of evaluative elements is sometimes apparent in the Vernacular Mode. There is also further discussion of the relationship of Amber's contribution to the film theme and how it may be a development of it, a further example of the Speculative. This element is also present in the discussion of Kevin's contribution. It starts with a discussion as to whether it is too soft and the Manipulative and the Personal are involved in assessing this. There is a comparison with Jacqueline's contribution. The Speculative element is highlighted in Jacqueline's and Kevin's piece is still praised. There is further discussion of whether Jonathan's piece is Chinese and comment on the Speculative nature of the order.

The lesson ends with a final performance and the suggestion that the piece is performed to their classmates.

The lesson shows how a number of the modes can be part of a lesson and how a teacher can use this model to evaluate what is happening in a lesson and introduce other modes in her comments and suggestions.

The Role of the Teacher

Implicit in all the above sections are considerable implications for the teacher. S/he may be the curriculum organiser in a particular school, a class teacher organising such activities with his/her class a part-time music teacher in a primary school or a teacher of individual composition to name only a few of the possibilities. This latter is a possibility in the area of employment of peripatetic teachers in the secondary school in the light of the GCSE examination. I have seen a school where this role has been handed to the peripatetic guitar teacher. (I am sure that many other ways of employing music teachers exist and can be invented.)

I would like to stress one role seen in the lesson on tape - that of the rememberer of the pupils' ideas. In my experience the pupil often forgets a good idea in the process of refining a piece and I have to say 'Do you remember how?' In the Speculative Mode the compositions become longer and the second attempt is often very good. If the pupil is then encouraged to refine it further or integrate it into a group piece there is a period of apparent disorder until the composition codifies again. It is difficult to describe this in words but I know that others have shared the experience. The teacher then may have to retain the ideas of the initial inspiration. S/he can then reintroduce them when appropriate.

There is now a new dimension in the role of the teacher that was not present in the early work of those who initiated composition activities in the 1960's. The GCSE examination now demands the assessment of compositions. But it is a fine line that divides the sort of assessment demanded by such examinations from constructive criticism and the constant encouragement and acceptance that colours all the literature on the environment favourable to the fostering of creativity that was looked at in Chapter Four of Part One. It is easy for either pupils or teachers (for both need to be involved in the process) to tear into shreds a composition that may be in one of the earlier modes and so prevent any growth on the part of the pupil. I try to start all evaluation with the question: 'Did you notice how?' and point first to something positive in the piece. This is often in the area of the Sensory Mode with some comment on an interesting tone colour. This, for example, can provide encouragement for a pupil in his/her first explorations on an electronic keyboard. Further comments, evaluation, assessment can follow such a positive start and this is discussed later in the section on audition. Brian Loane's article¹ provides fine examples of the sensitivity involved in this process. It links the teacher's role with that of the music critic (an idea also explored later in this chapter.) The teacher now needs to be able to make immediately a critical response aurally to a piece without the aid of a score or indeed much time to consider his/her opinion. Such a response becomes easier with practice. And in all of this the recording and discussion of good classroom practice in these areas would be of great value to future research in this area.

1. Loane, B., Thinking about Children's Compositions, British Journal of Music Education, Vol.1, No.3, November 1984, pp. 205 - 231.

It might prevent on the one hand the stunting of musical growth by negative comments and on the other the despair engendered by a sense that each individual piece is an isolated work of art and no objective criteria for discussion and comparison are possible.

A teacher must also be prepared to be a composer. A group of fourteen year olds wanted to create a melody. As I have already indicated I regard the AABA melody as a perfectly acceptable structure, commonly found in music in many cultures. This pattern was barred out on the blackboard. (All the pupils in the group were familiar with traditional Western notation.) A two bar opening fragment was written up. We all sang it. Then I started work on an answering two bars. I sang possibilities; they suggested examples; we discussed and compared possibilities; words like finished and unfinished emerged from these. And this same process in constructing the B section led to the use of sequences and other common melodic devices. One suggestion involved a modulation. We shared the process of refinement using sound and words. I used my knowledge of notation to write them down which helped us to compare possibilities and clarify our thoughts. They went away to their electronic keyboards and continued the same process alone. It was interesting that some of them were quite shy to sing at first; however, as they worked on their keyboards several were humming before they tried it out instrumentally.

Another good example is of Beverley, a jazz/pop singer of some considerable ability who is respected and admired by staff and pupils alike for her performance at school concerts and other venues. She joined the examination class in the fifth year and although there was little doubt that her prowess in performance would be well recognised,

in composition her work was limited and she was dissatisfied. We were working largely with instruments. Then my colleague and I thought of her great strength, her beautiful voice. So we found a poem. Beverley and I looked at it together. 'Sing it, Beverley' I said. 'How do you mean, miss?' she replied. 'I don't know, Just do it, Beverley'. I replied. 'But what's the tune?' she responded. 'You're going to make it up', I replied trying to keep hopeful. 'I don't know what you mean, miss' she answered. 'Well, something like this' and I sang myself. I do not remember it exactly, but this is in similar style:

Music Example 53



'It sounds a bit like an English folk song' I added, 'But then that was what I was brought up on. Yours will sound different because your experience is of a different style'. 'I think I've got it', she said. I asked if she needed help and she replied that she would go to the practice room and come back when she was ready. Ten minutes later she was

back with this melody:

Music Example 54

Bright days shall turn to night, my love, And the
rocks will melt with the sun. And the fire shall
freeze and be no more And the ra - ging
sea will burn.

The notation cannot capture the rich vibrant quality of her singing with its subtle ornamentation. 'That is very beautiful, Beverley', I said and she smiled. A student working in the school provided the chords on the piano offering them on a 'Do you like this or that?' basis. The song was recorded. It was so much loved by her peers that people kept coming to the music department just to hear it. And the story is continuing. There are now several refinements of the song,. More verses have been added and humming sections. There is a small ending section. Also the student's piano accompaniments are developing as she gains more confidence. Beverley has written several more songs recently. Her fear is gone and her inspiration is often very rapid and immediate.

These are stories of successful projects; but a teacher's first attempt at composing with children can be frightening and organisers of courses for teachers should not lose sight of this. I hope that the spiral will help here.

Performance and Audition

The story of Beverley illustrates well the fact that a person's ability in performance may not be matched by their ability as a composer. In the preceding sections there have been many examples of the way these other areas may be used to develop people's composing ability, like the acquisition of two stick technique on pitched percussion in the Manipulative Mode, learning the recorder in the Vernacular and the playing of a chordal instrument in the idiomatic. Some of the frustration experienced by pupils further up the spiral in group work can be in the performance area. Group members may lack the technical skill necessary to carry out the composer's intention.

But what of these areas themselves? It is likely that the sequence outlined in this thesis is similar in each of the areas, as it is deeply rooted both in psychology and in the nature of music. This will be returned to later. But according to Swanwick, each of the activities of composing, performing and audition need to be engaged in for the development to take place. (It must, of course, be said that in some traditions the roles of performer and composer are contained in a single person or group of people.) Here is the dilemma of some music teachers at present. Their own experience may largely be in the areas of performance and audition and yet they are now required to teach composition. In the preceding section, it has been seen how a teacher may learn along-

side his/her pupils. It is also possible for the teacher (given of course, the precious gift of available time) to work on his/her own along the lines set out in many of the projects set out above. It may help to realise that one's early attempts are not invalid but merely stages along the way and I hope they will find the map encouraging.

If the spiral does have some application in the areas of audition and performance, it does seem that someone who appears to be in the higher levels of the spiral in one area, experiences a sense of frustration in others. Beverley's story shows this well. Bernard Shaw, a skilled listener but with limited ability in composition and performance, might be said to show an imbalance. His audition was possibly at the Metacognitive Level but in performance and composition his development was much lower.

It is also possible, however, that given the experience of composition a person will move more rapidly through the other modes. Beverley's story perhaps shows a person moving rapidly through the Materials Modes and into that of the Vernacular and even the Speculative. The variety of the experiences of pupils particularly at the fourteen and fifteen year old level will probably mean a wide variety of speeds in passing through the modes in the spiral model.

Performance

This would lead to the possibility that the spiral model may have implications for the teacher of performance as well as for those working in the area of composition. A person often decides to play a particular instrument because of its particular tone colour. The acquisition of technical skill may be the Manipulative Mode. With this achieved there

can come a concern for the expressive aspect- the Personal. The integration of this into the conventions of musical style may characterise the Vernacular. Then may come the introduction of the unexpected the Speculative followed by the understanding of different styles and varying details of performance to conform with these. Then may come a preference for one particular style and a sense of valuing it with an ability to talk about a piece and his/her feelings about it. As in composition it may be only professional performers who reach the Systematic Mode in which Materials, Expressive character and Form are welded together into a performer's own distinctive style.

I can illustrate this possibility with an example from an imaginative fourteen year old piano pupil. She was learning a Prokofiev waltz in which a four note motif recurred in various ways. In the first section its first appearance involved a repeated note which cannot on the piano be played legato. Later legato was a possibility. We played the fragment in the two phrasings - the Manipulative. We discussed the character of the motif- the Personal - and its characteristic rhythm-the Vernacular. Then we discussed whether its role in the structure of the first section and in the piece as a whole suggested that all appearances should be the same or different - the Speculative. We talked of Prokofiev and characteristics of his style - the Idiomatic- and compared it with a Chopin mazurka she was also learning. As we discussed the relationship between the styles, the use of the piano, discussed the relationship between the styles, the use of the piano, the contrasting characters, the differences and similarities in texture and structure we entered the Metacognitive Level. She went away to try out the various possibilities and decide for herself, but she was fully aware of the issues.

Indeed teachers of performance have traditionally divided problems into Technical and Musical, which may be examples of the levels of Materials and Expressive character. The level of Form has sometimes been separated off into classes of General Musicianship although imaginative teachers have always integrated them into their work as many master classes show. The Metacognitive Level may have been similarly given over to critics, adjudicators and examiners. (This will be returned to later.)

Audition

Ways in which audition can be used to assist the process of composition have been hinted at throughout this chapter; and if the implications of the section on performance are followed through the complexity that may be involved here can be seen. There is the composer operating at various levels of the spiral with its complicated interactions, there is the performer who will also bring his/her own experience to bear on this; and finally there is the listener with another set of experiences. The potential complexity of the situation which is possibly that of three interlocking spirals is clear. Thus can be seen the seeming impossibility of engineering such a process in a classroom and how that the older the pupils are, the greater the potential complexity. It is possible, and only possible, that the spiral will provide just a few pointers as to how to set up an environment in which this complicated interrelationship will be achieved to the satisfaction of all involved - and maybe to analysing the problem of creative listening set out by Keith Swanwick.¹

1. Swanwick, K., The Concept of 'Creativity' in Music Education, in Education for Learning, Autumn 1974, pp. 34 - 43.

One possible relationship was made in the quotation from Kris in Chapter Four of Part One.¹ He suggested that the creative listener may pass through the same processes as the composer in reverse.

This quotation describing a sixth former's response to his first experience of a sitar recital shows a movement through an involvement with the Materials (the tone quality) to Expression and then to the Form and finally a Symbolic Mode of involvement:

For the first twenty-five minutes I was totally unaware of any subtlety whilst wondering what, if anything was supposed to happen during the recital.

What did happen was magic!

After some time, insidiously the music began to reach me. Little by little, my mind all my senses it seemed - were becoming transfixed. Once held by these soft but powerful sounds, I was irresistably drawn into a new world of musical shapes and colours. It almost felt as if the musicians were playing me rather than their instruments, and soon, I, too, was clapping and gasping with everyone else I was unaware of time, unaware of anything other than the music. Then it was over. But it was, I am sure, the beginning of a profound admiration that I shall always have for an art form that has been until recently, totally alien to me.²

The production of verbal accounts of compositions in the GCSE exam examinations could involve the Metacognitive Level of audition. I sit down with my pupils and we listen together to their tapes. We discuss each piece and comment on what we hear in it now compared with when it

1. Kris, E., Psycho-Analysis and the Study of Creative Imagination, New York Academy of Medicine Bulletin, 1953, pp. 334 - 51.
2. Dunmore, I., Sitar Magic form Nadopasana One, London, Editions Poetry, 1983, pp. 20 - 1.

was created. The following questions based on the spiral model have proved fruitful as the basis for this discussion (and indeed I have used them with compositions from pupils of other ages as well):

Is there a concern for sound
 Is there a sense of pulse?
 Is there expressive power?
 Is there rhythmic and melodic shaping, a sense of phrase?
 Is there a concern for form? Is there an element
 of surprise that holds our interest?
 Is it in the context of an idiom or style? Is there
 some harmonic/contrapuntal interest, a concern for
 texture?
 Has the composer been aware of what s/he is trying
 to achieve, has s/he a sense of purpose?
 Is there a worked out scheme that gives the piece
 unity and variety in the areas of materials,
 expression and form?

Here the pupil is also caught up in the world of musical criticism. Such people as the critic, the musicologist, the musical philosopher, the ethnomusicologist and the controllers of the mass media have all been concerned in communicating to the world the value of musical works of art. In so doing they have often tried to re-enter the world of the composer, a complex area explored briefly in Appendix Two.

Music, Creativity and Feeling

It has already been seen in Chapter Two of Part One how complex the relationship between these three areas are, and it has been explored by a vast number of writers, many of which are operating from different standpoints - psychological, therapeutic, educational, musical, to name but a few. In the literature on creativity the work of J.P. Guilford on cognitive processes stands apart from the largely psychotherapeutic literature on motivation. In music history the Baroque Doctrine of Affections and the word-painting of the madrigalists are but two examples of attempts to weld them together. The world of music

therapy also has insights here it can share with education. Koestler's concept of bisociation¹ and Brian Loane's use of it and the work of Langer² will also prove helpful. It is significant that it is in the songs in the Personal Mode that these links seem to appear first in the children's work.

The relationship is not necessarily that of direct referentialism. There is a distinction between referentialism and expression. Keith Swanwick in his professorial lecture outlines the concept of abstract expressionism:

Imitation: The more obviously representational an arts activity is, the more it refers to events in life, the more it is imitative, having what I would call expressive character. We can obviously take imitation as a focus for classroom or studio work. Thus, in drama we might initiate role-playing, acting like someone else. In literature we might tell a story from another's point of view. In the visual arts we might try to represent a particular incident or person; or, in a more abstract way, seek to render an impression, a feeling, a quality of experience. In dance and music we might set the problem of communicating a particular dynamic process: the coming of darkness or dawn, the act of shrivelling up or of opening out, a sense of increasing stillness or activity.³

Earlier in the same lecture he has shown the relationship of this to forms and structures lifting the argument to the level of Form:

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1. Koestler, A., The Act of Creation, London, Hutchinson, 1964.
 2. Loane, B., op.cit.
 3. Swanwick, K., The Arts in Education: Dreaming or wide awake?, A Special Professorial Lecture delivered at the University of London Institute of Education, London, London University Institute of Education, 1982. p. 23.

But what of music and so called abstract art?
 Surely the same gathering of rhythms and masses,
 whether of tone or colour of line, conspire to
 focus our attention, to raise our expectations,
 to surprise, to tease, to rouse? Even abstract
 music is essentially metaphorical; can raise
 before us images of hard edges of throbbing
 movement, of fleeting shadows, of massive substance,
 of flowing tranquility; and can relate these to-
 gether in logically evolving structures that rise
 before us with the same ordered, sequential
 presence as in poems and play.

And yet it is possible in music to go beyond the ordered, sequential presence of verbal forms such as poetry and plays because music through its texture has the quality of simultaneity. Sounds do not only happen in sequence but also simultaneously. A simplistic example is Handel's aria O ruddier than the cherry from the cantata, Acis and Galatea. Here the sopranino recorder runs its way over scale passages while the bass voice of Polyphemus leaps its ungainly way below. Polyphemus can be both mighty and humorous simultaneously through the interrelationship of all the levels of the spiral - Materials in the contrast between the bass voice and the sopranino recorder, expression in the character of these tone colours, the phrasing of the lines and the words used, the Form in the whole being related in terms of harmony and counterpoint, the Metacognitive in an appreciation of this in terms of the Baroque cantata. However, such possible applications of the spiral are highly speculative and there is much more work needed.

IMPLICATIONS FOR FUTURE RESEARCH

1. The Further Observation of Children's Musical Work

The spiral model evolved from the practical work of one researcher in one school. It has, however, already been seen that there are hints at it in the work of many theoreticians and practitioners and it is also firmly rooted in the nature of music itself as Swanwick's work shows.

As such it may be regarded as a rough map of the domain. To be sure of its accuracy the research needs to be replicated. There would need to be a team of researchers in a variety of classrooms and cultural settings. Then we may find the effect of such factors as geographical location, different cultural groups, different classrooms, different teaching styles, different instruments made available, the personalities of various researchers and their relationship with the children. (Certainly as I extend the work with 12,13 and 14 year olds there is a desire to use electronic keyboards in place of or in addition to percussion instruments and I have also now reintroduced a chromatic xylophone which they show increasing skill in handling.) It is possible that the design of the spiral will be modified or filled out if such research is undertaken.

2. The Area of Pupil Profiling

This is an area much discussed in contemporary education. In the area of composition the work appears to be perhaps somewhat haphazard. It is often suggested that there is a lack of language necessary to communicate from one teacher to another. Malcolm Ross has worked in this area.¹ The modes of the spiral may also help to provide this although the patterns may not be so clear with older pupils and further refinement may be necessary. Here, as already hinted at in Chapter Three previous experience in the areas of audition and performance may make the pattern more complex, or may enable pupils to pass more quickly through the modes.

1. Ross, M., The Arts and the Adolescent, Schools Council Working Paper 54, 1975.

Another problem may be that pupils can return freely to earlier modes and any profiling system would therefore have to take into account a folio of pieces by a single pupil (as was found necessary in the pilot study involving the judges outlined in Chapter One of Part Two) to ascertain reliably the level of development in terms of the spiral.

The research was started with very young pupils and can perhaps be more reliably and honestly applied to children aged 3 to 11. Although the work of older pupils is included, this was collected less systematically and more planned collection of their compositions may give us further details as to the nature of the Idiomatic Mode. Some of the children in the original project are still being recorded and their work may give some help here too. So also will interviews with the pupils who have now refused to have their compositions recorded in this way.

It is also possible that people who start relatively late in terms of age in the area of composition follow similar patterns as those of the younger children in this survey but move perhaps more rapidly through them. There are hints at this in my own work with both teachers and pupils but further research is needed if such a view is to be fully supported.

3. The Establishment of Grade-related descriptions for assessing Composition Examinations

Much of the work in this area so far might seem to be somewhat arbitrary or to use unclear criteria. The spiral model being rooted both in the nature of music and in developmental psychology might prove

more serviceable. It may even prove serviceable for other examinations in composition than the current GCSE that may be devised. Again, however, it must be said that a pupil may return freely to earlier modes for specific pieces and a folio of pieces would be necessary to apply such grade related criteria as may emerge. It might give a system of grading based on a pupil's development. This might be as well as, or, instead of, the establishment of criteria for the excellence of an individual piece. Further research and the collation of assessments made by researcher and moderators of compositions submitted for GCSE would help to clarify these issues.

4. The Idiomatic and Symbolic Modes

The research centred on the work of children aged 3-11 with a few examples from 14 and 15 year olds. I am at present continuing to tape pupils aged 12 and 13 and this should help us to understand the links between the Speculative and Idiomatic Modes. More research in this area could draw on the experience of teachers preparing pupils for school leaving examinations. It might help to answer many of the questions raised in the first section of this chapter. Similar work is needed on the swing from the Idiomatic to the Symbolic and will probably be easier when modifications are made to existing Advanced Level syllabuses or indeed other composition examinations are devised.

5. The Application of the Spiral Model in the Area of Performance

Such an application could be in the variety of ways outlined in the area of composition in the opening section of this chapter. It could

be the basis of a scheme for the teaching of performance such as Pace's¹ referred to in Chapter One of Part Two. But in such a scheme pieces of a more conventional nature would be blended and balanced with more unusual, idiosyncratic pieces. As such it might bring together the music of the instrumental tutor type books with that of established composers. The choice of where to start with an individual pupil might be determined by the age or the stage of development of the pupil (bearing in mind that the ages given on the spiral may only be true of the pupils in that particular school). This implies the use of the spiral as a guide to individual development. It might also help in planning the approach to a particular piece. It could also indicate appropriate times for the introduction of ensemble performance.

However, there are deep-seated divisions of opinion among instrumental teachers about methods and much research would be needed if the reconciliation of apparently opposing views proposed by the spiral model were to be accepted. If, however, the model did prove valid then it might help in the establishment of grade-related criteria for school-leaving examinations and some that would be applicable to the area of performance in general, rather than ones that are only peculiar to particular instruments.

6. The Application of the Spiral Model to the Area of Audition

Research into this area will be difficult. It will run into the problems already identified in the use of the problem-solving model

1. Pace, R., Piano Course, New York, Lee Robert Music Publications INC., 1982.

for the creative process in Chapter Three of Part One - that the response may have to be in terms of words and dependent on the pupil's capacity to articulate their experience. This may be very limited with young children. It has already been indicated that movement and the visual arts may be one way to approach it but all these other media which are essentially being used as pointers to the experience will also contain their own development which may or may not follow the spiral model and are areas for research into its possible application in their own right. With older pupils words may prove possible and grade-related criteria for school-leaving examinations could be drawn up from pupil's descriptions such as those given earlier in this chapter. It would seem, however, that it could be necessary for the pupil to have reached the Meta-cognitive Level for such an approach to be possible.

As has also been already suggested, the pattern in audition may be complex and could be that of interlocking spirals of composer, performer and listener; and also that the listener's response will also be influenced by his experience in composition and performance. Any research into this area would have to bear in mind these possible complexities.

It is interesting that the trend in audition in society is to a greater intimacy in this experience. The walkman and the personal stereo with headphones are far more the norms of society in general than the communal concert which is a less frequent and special experience. Does this reflect the greater complexity that might be present and the problems of setting up a corporate audition experience in a classroom which cannot accommodate this complexity? Further research into this would have great significance for the so-called 'listening' tests of the current GCSE examination.

7. The Relationship between the right and left hand sides of the Spiral Model

Some of these have already been hinted at in the section entitled Left to Right in Chapter One of Part Two. The swing to the right is one toward social sharing. This would certainly imply that there should be some links made with community music making. It could imply the use of popular tunes from the mass media in the curriculum. It has already been implied in Chapter One of Part Two that especially in the Vernacular Mode this is common and there is room for much research into how this occurs. Sometimes, for example, it appears to be conscious and at others, unconscious. Sometimes pupils are only content with exact reproductions and at others, especially approaching the Speculative Mode they are conscious of varying them. Research into this area might look in detail at a pupil's total musical experience in school and society for a limited period to detect these influences which are only hinted at in this thesis.

The widening of pupils' experience of society's music through the use of performing groups of different traditions in school and visits to concerts is also to be encouraged here if the spiral model is accurate. The influence of these on pupils' compositions has already been hinted at in Chapter One of Part Two, but specific projects would need to be set up to determine the nature of the influence and the length of time required for elements to be assimilated into a pupil's style.

There are implications here for group work in composition when and how to introduce it and the effect it will have on the development of an individual. Only one task in my research involved the construction of

a piece for a group of instruments. It is possible that more time should have been allowed for the task, especially as the pupils got older. More refinement might have taken place and more practice might have been given in directing and performing. The composer was not so fully in control of his/her medium as in the other tasks and all sorts of factors like the personalities of the other members of the group as well as their technical capacity influenced the final result. It is also possible that I should have played a greater part in the piece rather than remaining in the role of observer as I did for the other activities; for the role of the pupil composing with the group really included that of director and teacher of performance. This made the activity much more complex, although it must be said that pupils did find their own various solutions to the problem. On other tapes I have examples of pupils directing groups over longer periods of time and analysis of these might prove helpful in teasing out some of the strands; the issues and the possible ways of working varied with the age of the children. These tapes might also throw light on possible roles for the teacher in this.

As much music in the world of popular music is created by a pooling of ideas there is also much scope for research into the relationship of this method of composition to the spiral model particularly in the Idiomatic Mode.

8. The Possible Effects of Personality Characteristics on the swing from left to right in the spiral model

It could be argued that the left hand modes of the spiral emphasize

the individual. They tend to be more idiosyncratic and chaotic; some writers as seen in Part One would say that they were more original or even more 'creative' in a somewhat value-laden sense. The right hand modes indicate a greater concern for others and an appreciation of the value and necessity for modelling and responding to the influence of peers. It could be argued that certain personality characteristics dispose individuals to embrace more readily the modes on one or other side of the spiral. However, as it stands, the spiral implies that these may be different at different stages in a person's life. There is scope for further research as to whether either or both of these is true.

9. The Role of the Teacher

This is implicit in all the discussion of the relationship between the left and right hand modes of the spiral model. In most of the tapes analysed as part of the research I did not attempt to do anything other than observe. The only exception was the playing of an instrument in the group compositions. This was offered as an option to each child and some chose to take it up and some didn't. I was aware that my participation did influence the course of these pieces although I always endeavoured to follow the instructions if any were given.

However, it is, of course, true that all the children in the survey were taught by me in class. It is possible that this had an influence. It must, however, also be added that in other schools where my work was more limited similar patterns did seem to emerge. There is a set of tapes of this work and analysis of these would throw some light on the possible roles and influence of the teacher.

There are also a few tapes of non-specialist primary teachers initiating composition activities and more collections of these would help to illuminate how far the mode of development reached by the teacher influences their work with their pupils and indeed how the development of pupils and teacher interact. Indeed one criticism of some composition work with children is that the teacher composes through the pupils. Further research in this area might help to sort out the validity of such criticism.

Also, because the research was primarily concerned with individuals little can be said about methods of classroom organisation for composition lessons. This necessarily differs from one situation to another and a general class teacher in a primary school will have available to him/her the possibility of including music as a number of different group work activities. In Part One several writers talked of what was termed 'creative fall-out', which teachers of composition might well term an intolerable level of noise. Certain structures that I have found useful are discussed in Appendix One; but the redesigning of accommodation for music and the use of electronic instruments with headphones are other possibilities. Further research into this area may reveal alternative strategies.

10. The Use of Notation

It was stated earlier that an important role for the teacher was that of rememberer and that this was often done by means of notation of various kinds by teacher and pupils. It is often by the teacher at first. None of the examples analysed as part of the research were notated although I have indicated earlier in this Chapter and in

some of the publications listed in Appendix One how I do use notation in my work. There is much scope for researching into this area. For although there can be little doubt that its role in remembering and examining ideas is significant, I have seen imaginative composition projects lose all their life by prolonged and even unsuccessful attempts to notate them. Even if the somewhat newer concept of graphic notation is used, the process of notating can still become an exercise that makes the written score an end in itself and separated from the magic of the sounds it is meant to serve.

11. The Possible Application of the Spiral Model in the Area of Musical Criticism and Historical Description.

There can be only hints at this, as the practical work has been done with children (although in the Part One I have drawn on the writings of established composers and I have also gained a great deal of insight from a long friendship with the composer Jennifer Fowler.) It is examined further in Appendix Two. Of the nature of the Metacognitive Level there are only glimpses. The implications of the spiral design are that it will be more complex than the other levels. The work of established music critics needs to be scrutinised, as well as current trends in musicology if greater insight (or perhaps the word is 'insound') is to be achieved. Will it give us any idea of why certain musics are valued and by whom? Will it give any insight into routes already taken by the controllers of the mass media? Will it enable us to predict likely future routes? Will it give any ideas about imaginative financing of music? Is money the only way in which society places a value on music that can be seen? What of other cultures? What of therapeutic uses of

music? What of the links being reestablished between contemplation, the transcendental and music? A great deal of research would be necessary to see if the spiral model had anything to offer in answers to these far reaching questions.

12. The Area of Reference and Expression

Much philosophical research and clarification is needed here and there are unanswered questions in the research as it stands. The psychological position taken by Freud and Jung and the depth psychologists is not identical with that of the educational psychologists such as Piaget. The spiral model has attempted to provide some answers in the complex relationship between the worlds of feeling and music. But to do justice to this there would need to be consultation between the worlds of music education and music therapy, distinct though they are. Would we for example find symbolic representations of feeling in music common to many cultures as Jung did largely in the area of the visual arts? Would these vary with the age of the person? How far are children capable of abstract expression? Can we learn here from work done with children in the area of the visual arts?

13. The Area of Masculine and Feminine Creativity

Is there any difference between the musical symbols of girls and boys, women and men? The sample of children used for the research was equally balanced in the sexes and there has been no attempt to distinguish between them. Indeed, it would be true to say that both were equally forthcoming in their willingness to compose. And yet traditionally

there are fewer women who have reached any form of status in the world of composition. Only in the last century has the trend been slightly reversed and then only slightly. Why has this been so when this research would seem to indicate that both have equal capacity? Has feminine creativity been largely in the area of folk music under the labels of 'anon.' and 'trad.'? Do the girls tend more toward the right hand side of the spiral, towards social conventions? Certainly in much of my experience of groups composing where the sexes are mixed, the boys will often appear to lead, or at least be more verbal about their ideas. Does this say something about music, about society, about personality or about all three? It would be possible to re-analyse the tapes with these factors in mind or indeed to set up future projects designed to find answers to some of these questions.

Summary

The first part of this chapter is an attempt to see the use of the spiral model in practical terms. As it was drawn largely through work with children of primary age, it is in work with children of this age that the conclusions can most safely be drawn. The number of unanswered questions increases with children in the older age groups and adult composers (although there are more suggestions given in these areas in Appendices One and Two). The implications for individual development in composing reflect the nature of the research situation, in which I was concerned with the children individually. To implement them most satisfactorily would necessitate the setting up of smaller groups for composition activities than are generally found and an intimate musical knowledge of each child that might be difficult to achieve for a music

specialist working for limited periods with a whole class. It might be of more use to the general class teacher in the primary school. Another possibility is the employment of composition teachers working in smaller groups. Indeed, the role of the teacher is one that needs much greater exploration and is included in many of the suggestions for future research; and indeed in these have been set up a further series of hypotheses.

The practical work of the research had a simple structure-that of a single researcher observing the musical work of mostly individual children some of whom were quite young. They were tape recorded over a number of years. Its very simplicity perhaps enabled it to suggest answers to questions that other more complex projects have found difficult. But as such, it too has its limitations many of which have been outlined in this chapter. There are hints in this chapter of how, as the research proceeded, other avenues for exploration were considered and some data in the form of tapes was collected in them. The role of the teacher, be s/he specialist or not, and the role of the child leading such activities were two such areas. Such explorations would have produced complete theses in themselves. In this chapter I have attempted to hint at how the spiral model might be of assistance to people who choose to take those other routes, both pointing out its possibilities and its limitations. The further observation of children's work might need a similar project set up with older children. The best way of organising work in the areas of pupil profiling, the establishment of grade-related descriptions for composition examinations and further description of the Idiomatic and Symbolic Modes may emerge over the next few years by collaboration between all those involved in new school leaving

examinations. The application of the spiral model to the areas of performance and audition would require redesigned projects bearing in mind the problems outlined in this chapter. Work on the role of the teacher would require the development of techniques for observing classroom interactions. The use of notation is linked with this and would benefit from comparison with current work in the areas of creative writing as well as such music educators who stressed its importance, like Kodaly. The relationship of the swing from the left to the right of the spiral and the influence of personality characteristics on this are large areas and would need to involve people in fields other than education, as indeed would its possible application to the areas of musical criticism and historical description, the area of reference and expression and of masculine and feminine creativity. Here the questions to be addressed are so large that the design of any project to explore them would have to be carefully thought out in consultation with people whose experience was in different areas of society.

Thesis Summary

If Part One of the thesis sets out the strands of thought that run through the literature on creativity, Part Two attempts to weave them together in the context of a very simple practical research project. This is outlined in Chapter One of Part Two and Appendix Three. This sets out the emergence of an eight-mode spiral from Swanwick's work on the nature of music based on Moog, Piaget and English writers and the observation of the work of children aged 3-11 with some examples of those of 14 and 15 year olds. Chapter Two attempts to show how the strands apparent in Part One are woven into this model. Chapter Three

spells out possible implications of those work. It starts with areas that might be considered to be within the realms of music education and includes work already carried out as well as raising issues that need to be addressed. It broadens into other areas of music - that of criticism and historical description explored in more detail in Appendix Two (although current school leaving examinations are requiring teachers to have considerable expertise in these) and that of musical philosophy on music and feeling (although work here may be of considerable value in the area of children with special needs and children's capacity for abstract expression). I have then taken this further, spelling out the limitations of the research and suggesting lessons to be learned from it and designs that might be used for future research. Again the later suggestions extend beyond the confines of music education and demand collaboration between people working in other fields. If such collaboration can be achieved there may be considerable implications for world musics.

The two parts of this thesis represent a coming together of theory and practice in the area of musical creativity and children. This is encapsulated in the proposed eight-mode spiral of development. But in all the discussions of Parts One and Two we must not lose sight of the title which is Towards a Model As such it may be regarded as a first draft of a map. Like all maps it can show us ancient roads and pathways and suggest to us routes that we ourselves might take. What it cannot show us is the colour, life and excitement of the places we shall visit. In music we shall find that through the actual experience of the music itself. As it is through composition that this map has been drawn, I can only suggest that people, be they children or adults,

teachers or pupils, try it out by composing themselves. In so doing they will set out on a journey. But each in the end will have to find his/her own way. If the map is accurate and well drawn, at some points we will feel at one with others, at other times very alone. But what we will all share is music, perhaps the most mysterious of all the arts. Through it we may travel across the world, through history and into ourselves; but I hope that the wonder in the experience will never be lost. That can be shared by the youngest child and the oldest adult. I hope that the map will encourage people to set out on their own musical voyages of discovery, helping them along the way to find old landmarks and guiding them into possible future routes. For we all need to feel both that we know where we are and yet that there is still somewhere to go and a treasure that may be found.

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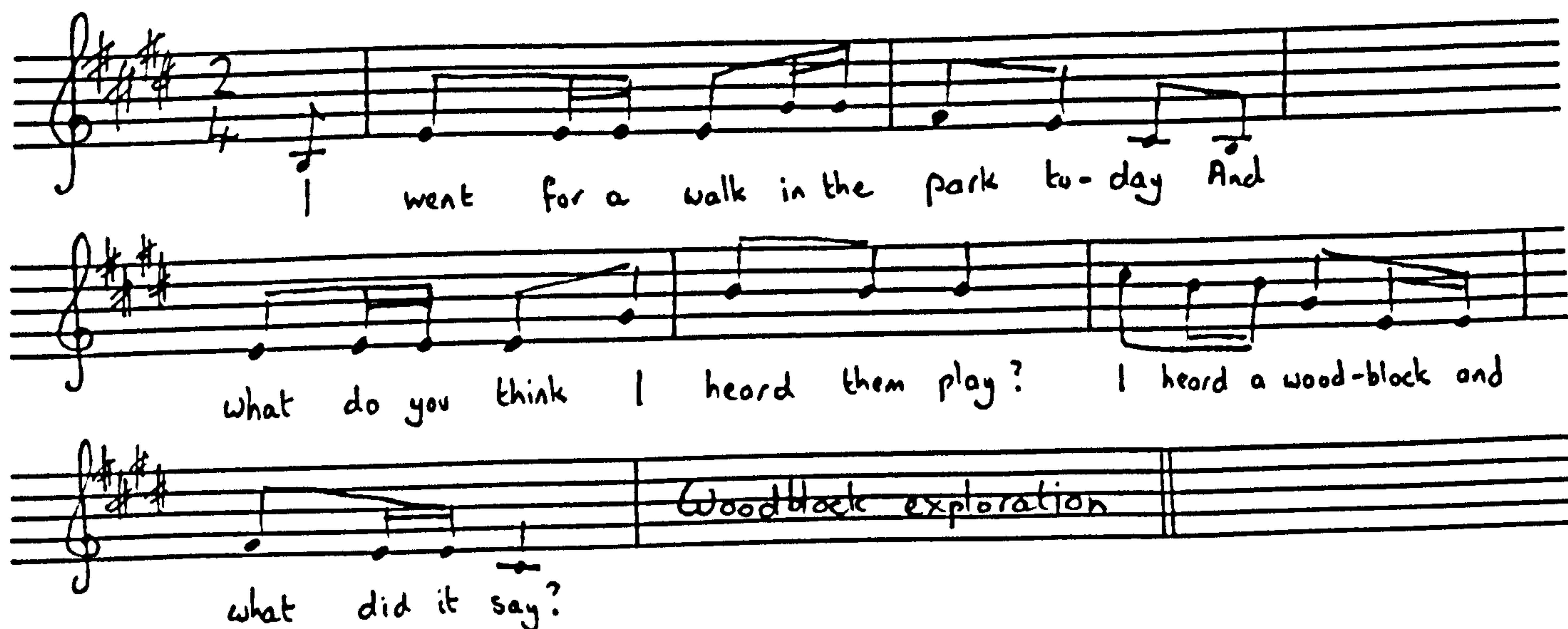
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APPENDIX ONEClassroom Texts and Teaching StrategiesGeneral Curriculum Strategies

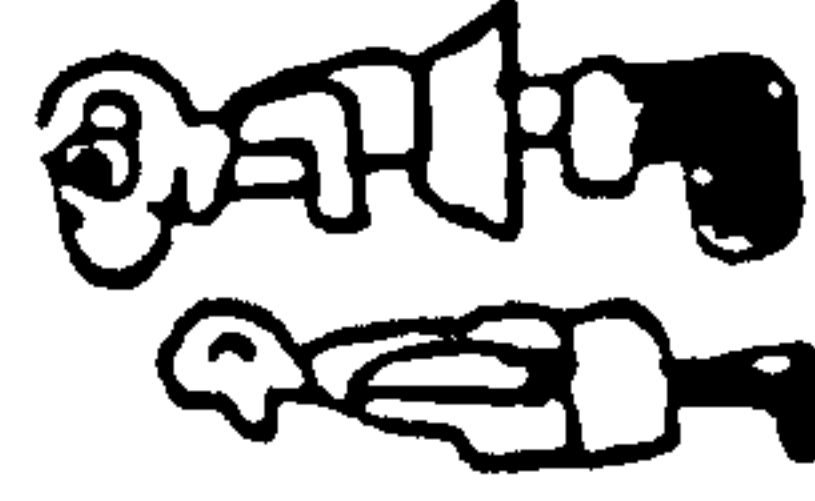
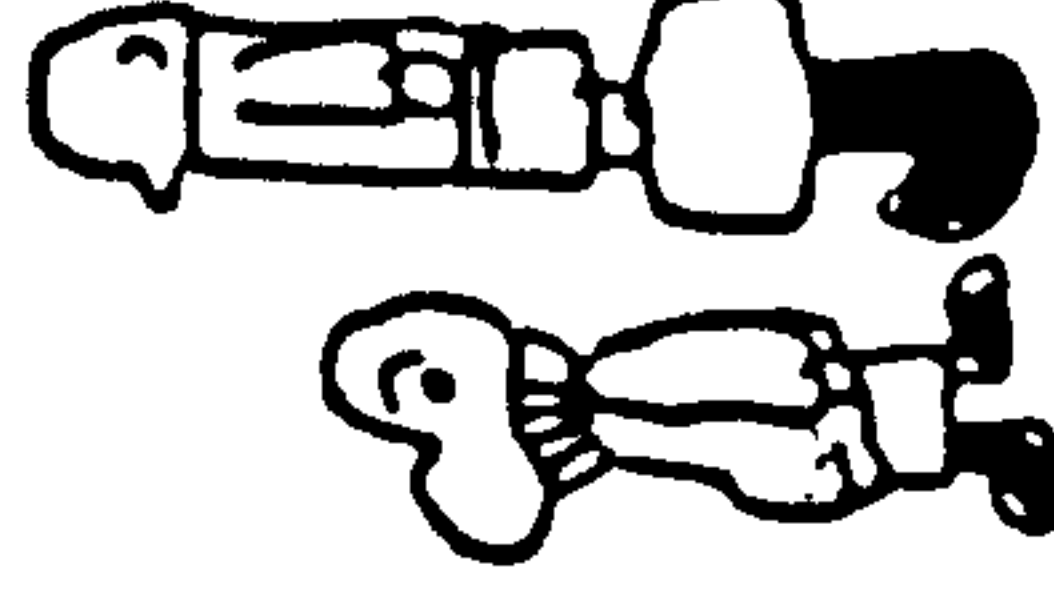
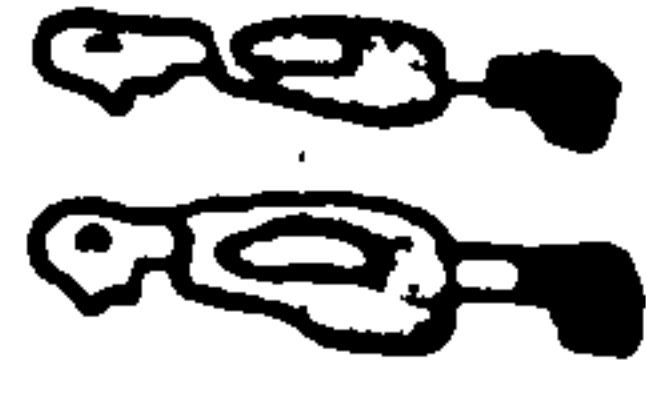
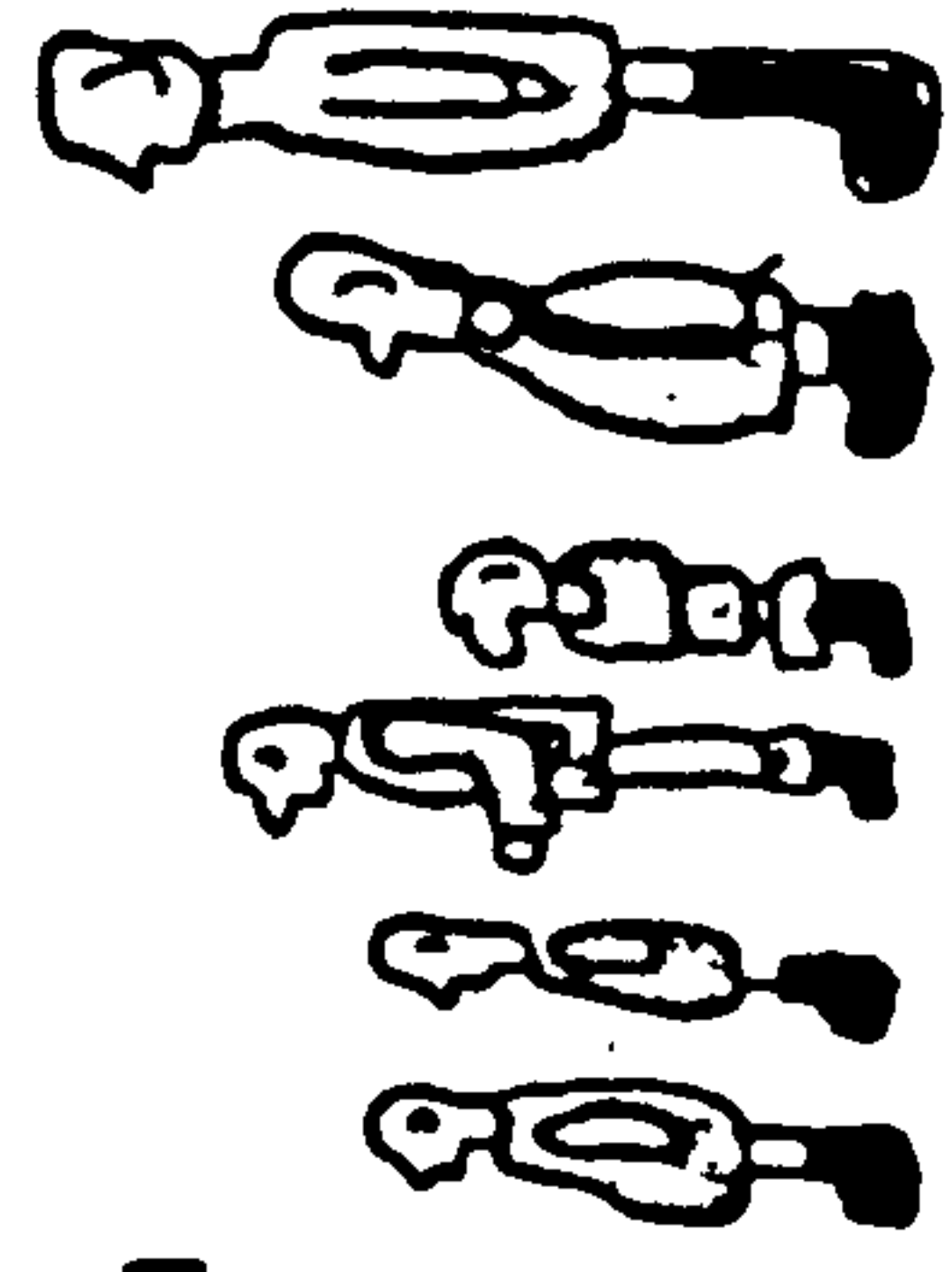
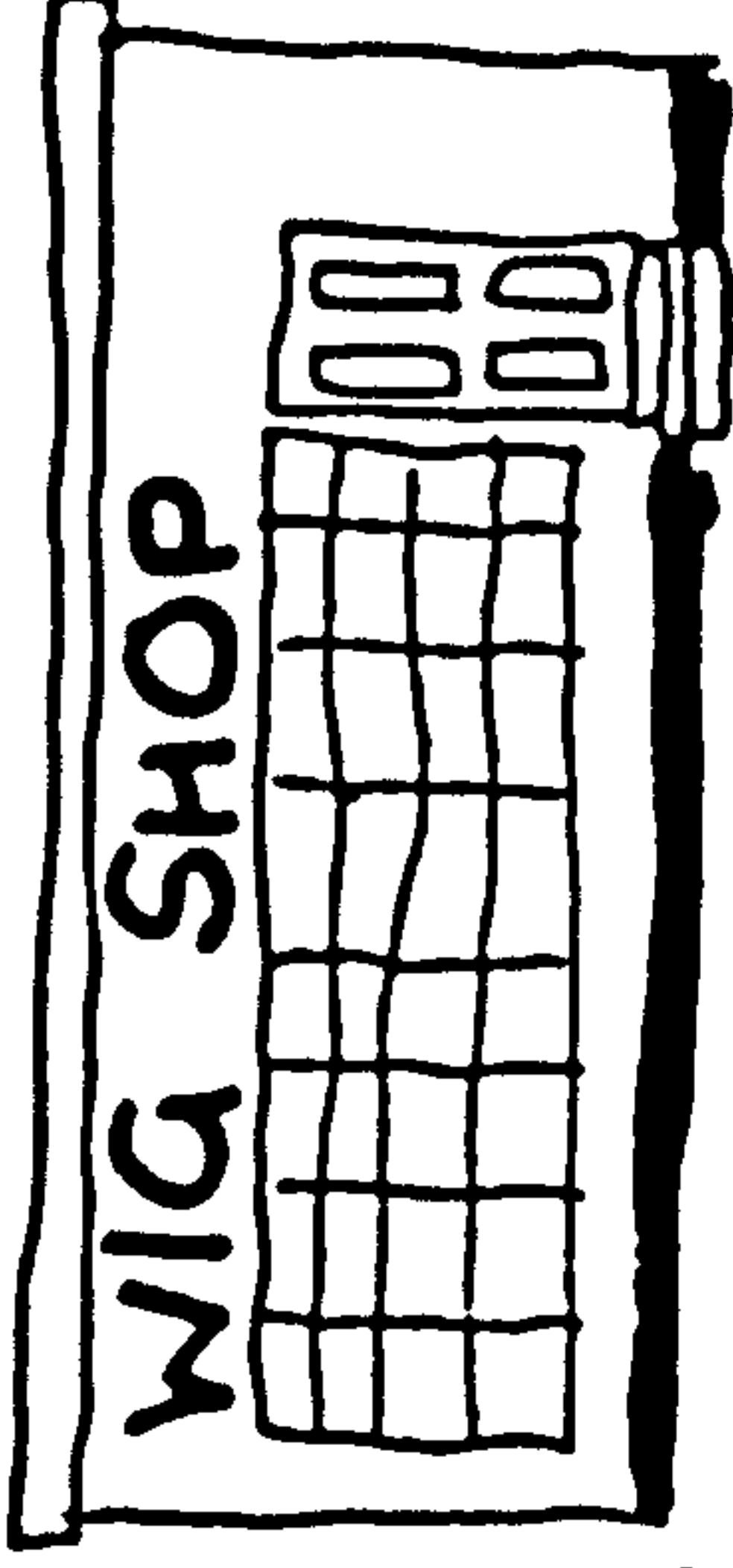
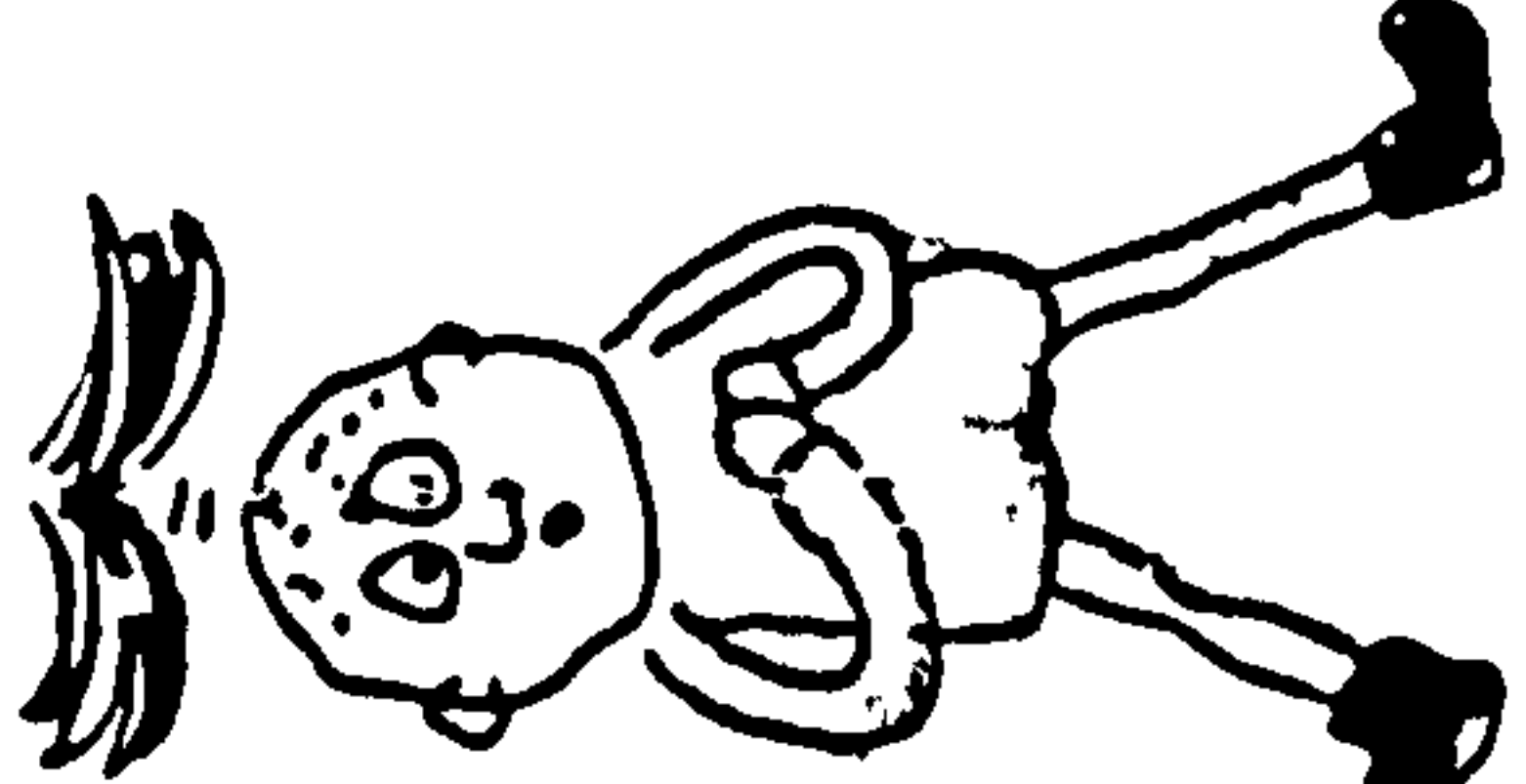
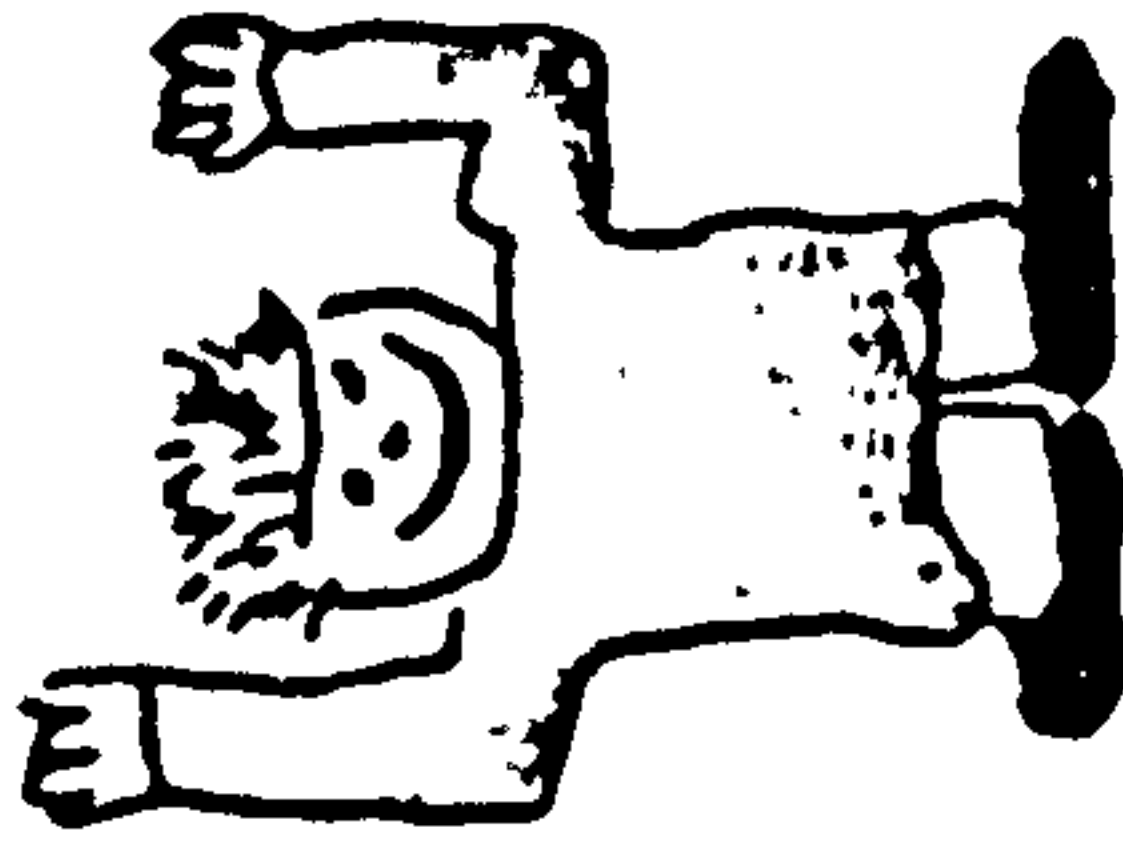
In the Sensory Mode it is suggested in Chapter Three of Part Two that the teacher needs to provide structures within which pupils can explore sound colour.

This song, adapted from one in Mrs Macaroni¹ contains space at the end for the sound exploration that characterises the Sensory Mode:

Music Example 55

This song is one such structure and the game is another. In Diana Thompson's book of games is one entitled Pompaleerie Jig:

1. Tillman, J.B. (ed.), Mrs Macaroni, Basingstoke, Macmillan Education Ltd., 1985, p.3



The Game

- All the class sit in a circle, except one child (Timothy) who stands in the centre of the circle.
- Timothy points to each child in turn while everyone chants:

ZEENTY TEENTY FEGGERY FELL,
POMPALÉERIE JIG
EVERY MAN WHO HAS NO HAIR
GENERALLY WEARS A WIG!
- When the word 'WIG' is said, Timothy is pointing at Jane, so she goes into the circle.

- Jane makes a funny sound with her voice, and chooses to match the sound with a hand movement. The remainder of the class try to copy her.
- The rhyme is then chanted again, with Jane pointing in turn.
- The game continues.

Note

Children who have sound discrimination difficulties are often surprisingly good at mimicing 'funny' sounds, where they are not 'right' or 'wrong' as they would be in a formal pitch situation.



In the Manipulative Mode adding a steady pulse accompaniment to a song and work in pairs in which one child holds a steady pulse while the other improvises are appropriate activities.

As pupils become aware of the expressive power of music, projects such as one based on Smetana's Vltava become suitable. In Forty Music Games to Make and Play this is linked with a game structure in which pupils can create pieces around the same subjects as Smetana.¹ Such work also encourages more responsive listening to the Smetana piece and can be linked to expressive movement. Many examples of projects linking words and music can be found in Exploring Sound.²

In the Vernacular Mode compositions using ostinati are useful. These can be seen in a game like Musical Geography³ in which word rhythms drawn from a world map form the basis of a group composition. It is also appropriate to explore the concept of phrase, through movement, through song and by melodic construction as in the videotape of work with a class of eight to nine year olds in Furzedown Primary School available at the London University Institute of Education. In this lesson can be seen the game Musical Conversations⁴ which is very useful in developing this concept. In it a pair of children hold a conversation musically on two instruments. From less usual lengths they edge towards the more conventional. It would be appropriate here to introduce the pentatonic scale through songs from

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1. Tillman, J.B., Forty Music Games to Make and Play, London and Basingstoke, Macmillan, 1983, p.80
 2. Tillman, J.B., Exploring Sound, Galliard, Stainer and Bell, 1976, pp.62-6
 3. Tillman, J.B., Forty Music Games to Make and Play, op.cit. p.72
 4. Tillman, J.B. Forty Music Games to Make and Play, op.cit. p.68

diverse cultures such as China, the North American Indians, the Inuit and English and North American folksong. Orff Schulwerk¹ is a very valuable source of material here (although it must be added that Orff's scheme which is set out in Chapter Four of Part One goes far beyond this somewhat stereotyped image of it) and also Brocklehurst's A Pentatonic Song Book.²

Games like Rhythm Snakes and Ladders³ can be useful in introducing conventional Western Classical notation in this mode.

The encouragement of musical surprises can be seen in the 'space' project described in Exploring Sound. Here can be seen how the concern for timbre characteristic of the Sensory Mode, can be used to create contrasts in the area of expressive character and so create the surprises typical of the Speculative Mode:

An extension of ternary form is rondo form, in which the first section recurs several times throughout the piece, with contrasting material in between. This gives the pattern ABACA. This is particularly useful if one child's or one group's contribution is particularly good, when it can be used as the A material joining the other children's contributions. For example, one class of mine built up a 'space rondo' using words and instruments. The word 'space', with its suggestion of vastness and mystery, was accompanied on glockenspiel and cymbal and used as the main theme. The first contrasted section (sometimes called an episode) was Mercury and Neptune - light and airy-sounding words accompanied by triangles, Indian cymbals, bells and maracas. The second was Mars and Pluto, heavy and solid, with drums and scrapers. So the overall plan looked like this:

A	Space	glockenspiel and cymbal
B	{ Mercury	triangles, Indian cymbals
	{ Neptune	bells, maracas
A	Space	glockenspiel and cymbal
C	{ Mars	drum
	{ Pluto	scrapers
A	Space	glockenspiel and cymbal ⁴

1. Orff-Schulwerk American Edition, Music for Children based on Carl Orff - Gunild Keelman Music für Kinder, Schott, 1980

2. Brocklehurst, B. (ed.), A Pentatonic Song Book, London, Schott & Co. 1968

3. Tillman, J.B., Forty Music Games to Make and Play, op.cit. p.22

4. Tillman, J.B., Exploring Sound, op.cit. pp.16-17

I have carried out this project with many classes and often the recurring 'space' theme is a melody of some kind, thus using one idea present in the Vernacular Mode.

The transition to the Idiomatic Mode may be through the exploration of a single chord as in this project:

Using a single chord can be a particularly exciting starting point for the improvisation of a simple song. In an all age Sunday school I set up an E minor chord on chime bars and guitars, and we created a simple chorus - 'Let us thank God for his goodness'. The verses were improvised by each member of the class in turn who came out and improvised vocally or on a pitched instrument set up with only the notes of the chord available, a statement about something for which he was grateful. The piece proceeded without a break, the chorus giving time for each person to come forward. The result written down would look something like:

Music Example 56

The musical score is written for four parts: Main Group, Person creating the verse, Chime bars, and Guitar. The key signature is one sharp (F#) and the time signature is 4/4. The guitar part is labeled 'Em throughout'.

Chorus:

Main Group: Let us thank God for his good - ness

Person creating the verse: Thank you God for

Verse 1:

Main Group: Let us thank God

Person creating the verse: all our five sen - ses

Verse 2:

Main Group: Let us thank God

Person creating the verse: etc.

Chime bars:

Chime bars: Em throughout

Guitar:

Guitar: Em throughout

But on paper such simplicity looks banal and shows nothing of the spirit of enthusiasm and involvement built up as the lengthy song progressed and got the level of the rhythm, gradually adding clapping and unpitched patterns as well. (These were created without losing the rhythmic impetus which was kept going by the guitars and chime bars.) It was a spontaneous experience of improvisation growing out of a lesson's discussion and activities not to be repeated or written down or retained by writing down or polishing.

This use of a single chord is a very useful one, for not only will songs and accompaniments using the notes fit together but also the song will work as a round. The African round 'Come and join us' is an example of this and the beautiful Hebrew round is based on the notes of the D minor chord.

Music Example 57¹



Then may come the use of chord sequences as the basis for songs. One such project is described in Exploring Sound² and a moving song resulted

1. Tillman, J.B., Music and Religious Education 3, Music Teacher, March 1978, pp.18-21

2. Tillman, J.B., op.cit. p.75

from these ideas with a class of fourteen year old girls:

Another starting point is the creating of a melody over a given pattern of chords. I play the chords over and over again on the piano or guitar until the class gets the feel of them. Then we start vocal improvisations over them until a tune starts to emerge. Then we split into groups, each with pitched instruments that can play the chords like chime bars, to polish the tunes. I often precede this work with some work on creating possible texts. One project is to look at the ballad through the ages, at how the broadsides were the forerunners of newspapers. The class then create their own ballads from contemporary newspaper stories. This is the final result of work like this from one group. It was based on a newspaper story from Northern Ireland (and on a chord sequence - D major, C major - that I have found particularly useful):

Music Example 58¹

Voices

1. Lo-ver's lane, Ul-ster style

Metallophones
(3 players)

Guar-ded by barbed wire, A sol-dier that is bold

Keeps his girl - friend from the cold, Barbed wire lo - vers.

Verse 2:
*But this romantic place
 Is not full of grace;
 Here the internees stay,
 Waiting for their freedom day.
 Barbed wire lovers.*

1. Tillman, J.B., Music and Religious Education 2. Hymns and Songs, Music Teacher, February, 1978, pp.15-18

The Organisation of an Individual Project

In an article in The British Journal of Music Education¹ is described the possible progress of a compositional project along the lines suggested by the spiral model.

We may have decided to base this activity on the materials of short and long sounds. Let us make sure that the first stage of the Sensory is properly entered, no matter what the age or previous experience of the children. There are different kinds of shortness; a very long sound has a very different effect from one that is only moderately long. These perceptions are an important pre-condition for sensitive Manipulative control. Now we must learn how to sustain long sounds, what techniques may be involved on different instruments, the use of beaters, for example, to continually activate sound as tremolo. We may now move to explore the expressiveness involved in combining short and long sounds into patterns that communicate (i.e. imitate). Is each student able to generate a short Personal musical gesture from short and long sounds? Is expressiveness communicated? We might then move to consider how these sounds can be caught up into existing musical practices, the Vernacular. Shall we choose to organise them within a framework or pulse and metre or within other musical conventions? If the children are above the age of about 9, we shall certainly want to push them towards the Speculative. Can we create a surprise using short and long sounds? Can they make a piece that holds the interest? Can we devise episodes that relate to one another either as contrasts or as repetitions? Are we concerned to broaden the range of what is considered to be Idiomatic? This will certainly lead us to encounter the music of others, as performers or in audience.

In an article for teachers of religious education describing some of my early work in composition in the classroom similar strands can be

1. Swanwick, K., and Tillman, J.B., The Sequence of Musical Development, British Journal of Music Education, Vol. 3, No. 3, November 1986, p.305-339

detected although at the time no such model was declared. The work led up to a performance in an assembly:

Twenty-five ten-year-olds cluster on the edge of the stage. From time to time some reach for some of the considerable selection of musical instruments that lie in front of them. They turn to the group next to them and with rapt attention embark on their performance.

The Light Theme

We had started with light on which we were doing a project. We sit in a big circle in the hall (acoustically the most suitable place for this work) and I give out the instruments, one for each, with contrasting sounds next to one another as far as possible. Each child has to say 'It is light' to his neighbour musically. A few seconds of trial period are allowed with ear splitting results. (I warn the children at the outset of this type of work that hitting the instrument as hard as possible does not necessarily produce the best results.) A raise of the hand produces silence. Each child has its turn and the intense concentration and care testify to the reality of the expression. We discuss different kinds of light - candles, fire, sun, moon - and try again. Now I give each child a number, the smallest sounds first, and signal each one to come in. Slowly with sand-paper scraped over the surface of a drum the match is struck and the smallest triangle tells of the candle glowing. The stars glimmer from the glockenspiel and fairy lights of Christmas time twinkle on the metallophone. The moon glows on the sleigh bells with a brief interlude depicting man's journey to it on tambour, tambourine, maraccas and cymbal. The sun rises on Indian cymbals and glockenspiels. In the distance comes the crack of lightning on the cymbal, the rolling thunder on tambour with padded sticks and rain on flowerpots struck with triangle beaters and chime bars. The storm gives way to the crack of fire sparks on claves and castanets and the leaping flames on tambourines, triangles, glockenspiel and bells. Gradually all the other patterns join and rise to a crescendo; an African drum pattern suggests dancing and we are caught up in a dazzling expression of humanity's experience of light.

From this we progress to work in groups. It is often difficult at first to combine all the children's sounds but with experience the children themselves become quite skilful at it, using contrasts between different types of sound and rhythmic patterns. They will often work at this in their own time and bring new sounds with them as well. With some classes I should have started with group work straight away and also have let them choose their own instruments. Our own compositions led us to listen to others' experience of light - Britten's Moonlight; Sea Interludes from Peter Grimes and Grieg's Morning from Peer Gynt. Modern folksongs like Malcolm Stewart's When He Comes Back from The Gospel Songbook were linked as well.¹

1. Boyce, J.B., Music, Learning for Living, Vol. 9, No. 2, November 1969, pp.18-21

Although the project was initiated at the Expressive Level it involved an immediate return to the Sensory and Manipulative present in the trial period. The group work suggests the appearance of the Speculative as is likely with children of this age.

Albert Chatterley's The Music Club Book is based on a highly successful series on BBC Radio for secondary schools. In many of the projects can be seen the author trying to keep the surprise of the Speculative Mode alive in the Idiomatic Mode. It also illustrates well how a single project can keep alive the earlier modes:

Chopsticks

Music Example 59

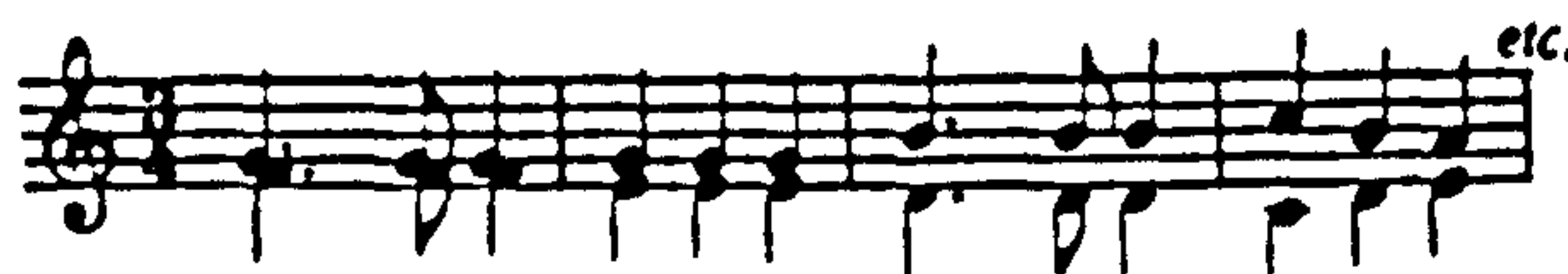


One very important aim in improvisation is for the students to reach the point where they are prepared to 'take a chance', that is to try and be original or different on the spot, without time for advance thought. I have left it until now to mention this because, knowing the reticence you may find towards improvisation anyway, it is much better to let all your pupils spend a long time discussing the various techniques, then put them into practice with forethought. In this way, they gain in confidence and imagination, and acquire the ability to create short events of real musical interest.

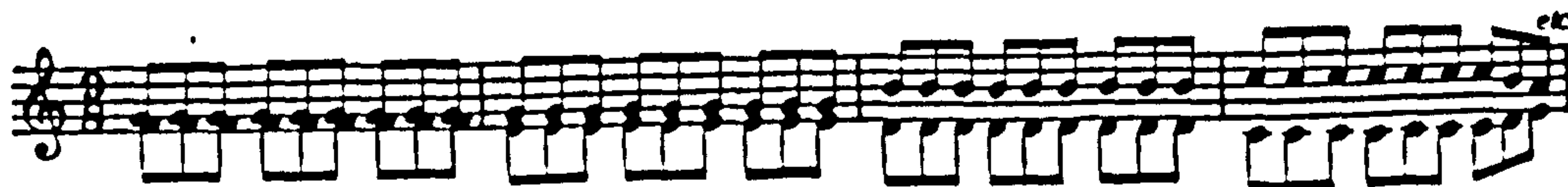
However the time will eventually arrive when you feel that you can put your students on the spot, and ask them to improvise without any chance to think about it in advance. So try it first with Chopsticks, a pianistic exercise from which many people go no further. See if you can get them further. Here are a few suggestions for the use of this banal (but popular) little tune in class:

1. Play the top two parts on higher pitched instruments (one or two players per instrument if you use tuned percussion) with the lower part played by a lower pitched instrument: guitar, piano, cello, bass metallophone. Press any other instrumentalists into finding themselves parts to play. Include non-pitched percussion.
2. Let one or two people at a time improvise a variation round their part including the non-pitched percussion, to see what they can make of it. Do it as a sort of 'spot' exercise, calling out names and giving no time for advanced thought. If you like, play an accompaniment yourself on the piano, to keep the whole thing going.
3. Let everybody improvise at the same time. It may be a mess; it may be very interesting.
4. Try it out at different speeds, and note how the speed affects what you can attempt.
5. Change the time from 8 to 4, 4 or 8 and see what the class can make of it. Discuss how a change of time changes the whole mood and feel of a piece.

Music Example 60



Music Example 61



6. Do suggestion 2 again at a slower speed but change the personnel more quickly, say every two bars. This will keep everybody concentrating on the whole piece even when they are not playing, in each case they should be asked to join in. Sometimes call out 'everybody'.
7. Start with one person, then two, then three, then four and so on until everybody is playing: then let them drop out similarly one by one in the same order as they came in.
8. Find some more simple tunes that you can use.¹

1. Chatterley, A., The Music Club Book of Improvisation Projects, London, Galliard, Stainer and Bell, 1978, pp.86-87

Here in suggestion 1 is the keeping alive of the feeling for timbre characteristic of the Sensory Mode, in suggestions 4 and 6 the variations of speed of the Personal and in suggestion 5 the application of the various metres explored in the Vernacular.

Summary

These activities show practical application of the spiral model. They show how rooted it is in the work of practitioners already working in the area of composition and also point to the development of future resources both in terms of the overall curriculum and also in the planning of individual projects.

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APPENDIX TWO

A Note on the Systematic Mode

The Possible Application of the Spiral Model in the Work of Established Composers

This is an undeveloped area. My research has not examined in practical terms the process of established composers. It is there in the literature referred to Chapters Two and Three of Part One, but by limiting my research to children up to eleven years with possible extensions beyond to sixteen years from my own experience, such a practical analysis is excluded.

It may, however, be possible to see in this work the use of figures and patterns from lower levels in the spiral (which would reflect their own previous experience) now incorporated into systems and structures. Here is a description of a piece by Jennifer Fowler (written by the composer herself for the first performance in January 1987):

BLOW FLUTE: ANSWER ECHOES IN ANTIQUE LANDS DYING

by Jennifer Fowler

Programme Notes

It is permissible to shorten the title of this piece to: "Blow Flute" for practical purposes! but the rest of the title does have a function too. It can call up the poetic echoes of Tennyson:

"Blow, bugle, blow, set the wild echoes flying,
Blow bugle; answer, echoes, dying, dying, dying."

It can call up musical echoes, too, at the cadence points: echoes of formal cadences from antique times.

Otherwise, the line is fluid: gathering around a nodal point, and dividing off to other nodal points. The rhythm progresses in groups of even notes: groups of 2's, 3's, 4's, 5's, accumulating and retreating. There are gathering knots of accumulations and tensions, sometimes dispersed, sometimes brought together to form a cadence.

The piece is about the sound of a flute: a sound calling up eddies and currents, and echoes.

This is the opening of the piece:

Music Example 62

BLOW FLUTE : ANSWER ECHOES IN ANTIQUE LANDS DYING

for Solo Flute

JENNIFER FOWLER

(♩ = 60)

p *mp*

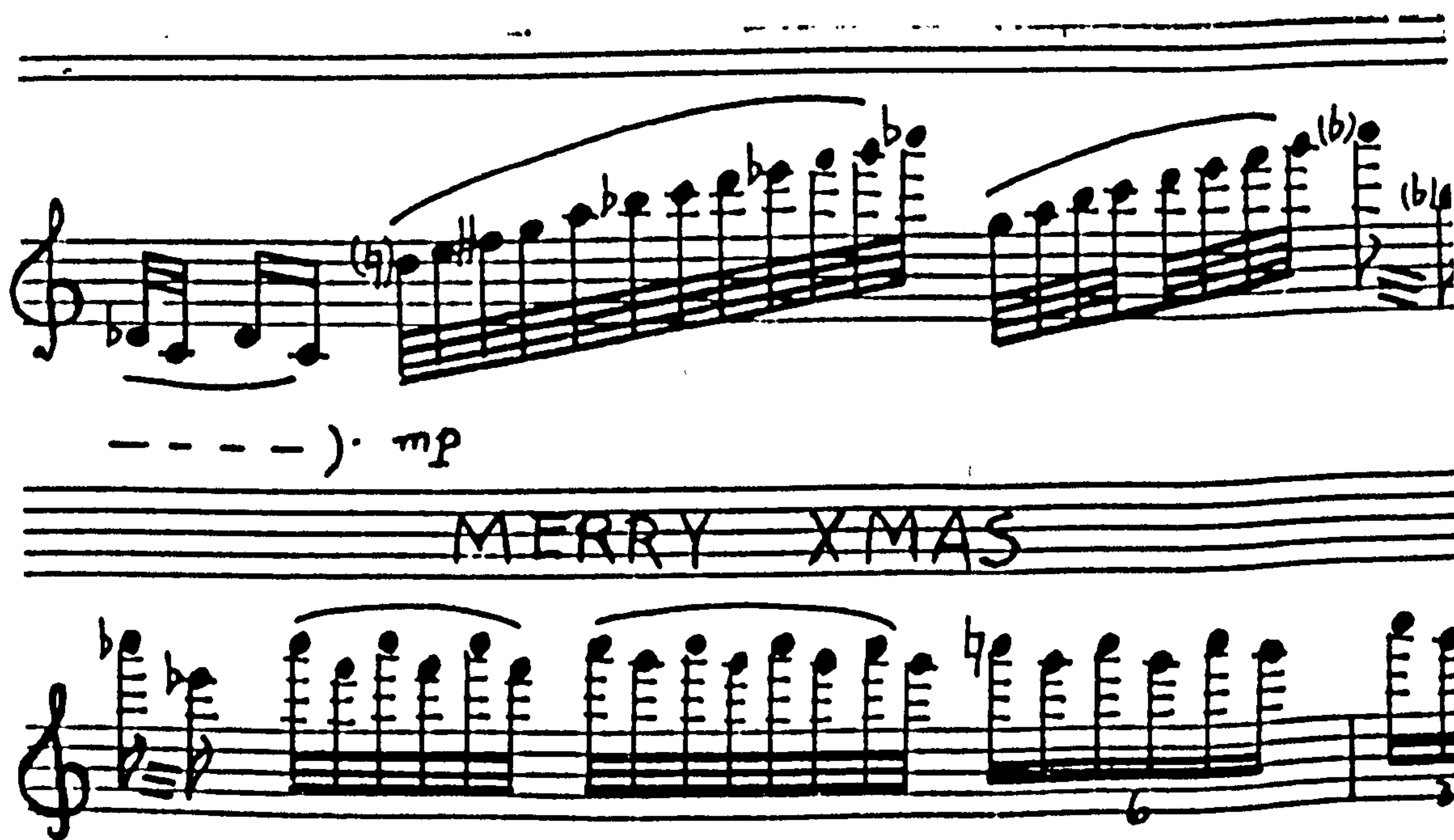
p *mp*

mf

p *mp*

In it can be seen quite clearly the patterns commonly found in the Manipulative Mode; but as can be seen from the description, codified and systematised within one piece. There is evidence in it too of all the modes. The Sensory is in the concern with the sound of the flute in the final sentence. The Manipulative is in the patterns used. The Personal can be seen in the alliance with the Tennyson poem. The Vernacular is present in the concern for cadence. The Speculative is in the variations of treatment of the accumulations and tensions which are sometimes dispersed and sometimes brought together to form a cadence. The Idiomatic is hinted at by the implied harmonies at cadence points and even more so in arpeggios and tremolos which although placed sequentially, I experienced at the first performance as simultaneous. The sense of value was clear in the rapt attention and rapturous applause of the audience at the first performance in 1987 and implicit in the writing of the composer. The Systematic would then appear in the overall plan of the grouping of notes in 2's, 3's, 4's and 5's. Thus can be seen in the total experience evidence of all the modes, all interacting in a single piece. I had the privilege of being allowed to share some years earlier the painstaking work that led to the piece. This is a Christmas card from the composer:

Music Example 63



Inside of it was written:

This is a redundant bit of a flute piece (I decided to cut the end down) and it is to be trilled in a joyful manner of Xmas morn.

Was the composer then working at the level of Materials and Expression?

The Adult Composer and the Child

This is only one example and there is clearly a lot of work that needs to be done; but in such work it may be possible to establish a link between the processes of the child and the mature composer. Jennifer Fowler in composing this piece was not consciously aware of drawing upon patterns from childhood. Her 'antique lands' were those of the music of history.

And yet here are raised two significant issues. The first is that a person's individual development passes through the same stages as those of music history. This idea has been around for some time.

From my own experience I give an example. Two eight year old girls came to me and said 'Please listen to our piece. It is Old Macdonald had a Farm.' They proceeded to play it with a descant recorder starting on G and piano on C - parallel fifths. Anxious to find out how they had arrived at it, I asked them how they had got there. They said that they had found the recorder part in a book in the library. 'What about the piano?' I asked, thinking it had similarly happened by chance. 'Oh we just messed about until we found something we liked. It's beautiful, isn't it?' 'Yes' I agreed, 'Wonderful.' Then they played another piece built in the same way. Later I told them how the monks in the Middle Ages had also enjoyed singing the same distance apart and introduced the word 'interval'. It is possible that here is an example of Jung's collective unconscious expressed in musical symbols linked in the Vernacular Mode. But this is a highly speculative statement.

Musical Criticism

The speculation of the last two sections may have some implications

for the area of musical analysis and criticism. Some writers would appear to have attempted whole books dealing with music at the Metacognitive level. Viktor Zuckerkandl in The Sense of Music would appear to become such. He makes many penetrating descriptions of works from the Western European Classical tradition mostly from the Renaissance to the early twentieth century. His introduction grapples at the level of Metacognition with the same problems as this thesis. This quotation illustrates his work well:

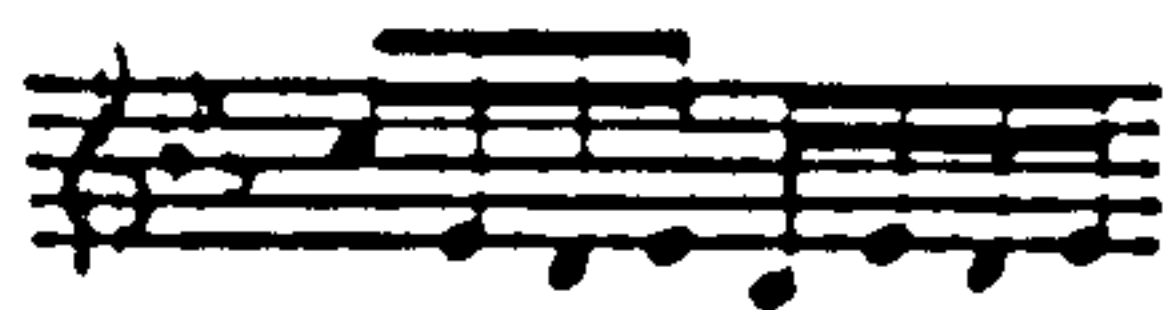
Repetition without Symmetry

For examples of structures definitely not of the circular type we turn to Bach's Well-Tempered Clavichord. We listen to the Prelude and Fugue in C minor of Volume 1.

After the Schubert and Beethoven pieces the absence of divisions is striking. No sections or subsections are formed, consequently no symmetries, no balance can emerge. Continuous forward motion dominates the picture. This does not imply, however, that nothing is repeated. On the contrary, repetition seems to be everywhere. But as mentioned before, repetition has a different meaning in a different context; here it means advance, not return.

What is the thing repeated if there are no sections? In the case of the Prelude it is a sharply drawn tone line, one

Music Example 64



half measure long, a formula rather than an explicit statement, not meant to be taken by itself, meaningful only as an element of the continuous flow. The formula is duplicated within every measure (in this sense the principle of symmetry can be said to operate here on the lowest level only) and restated with constant modification from measure to measure, until towards the end it gradually disintegrates. The whole is like on long melody - not of tone after tone but of block after block¹, with each block representing the content of one formula, thus:

Music Example 65



Here can be seen the little melodic fragment typical of the Manipulative

1. Zuckerkandl, V., The Sense of Music, Princeton, New Jersey, Princeton University Press, first published 1959, corrected edition 1971, p.92

Mode and the sense of 'forward motion' typical of the Personal Mode. The repetition is characteristic of the Vernacular and yet the disintegration at the end is of the Speculative Mode. The analysis of the chordal structure might indicate the Idiomatic and also the comparison with the idiom of Beethoven and Schubert. He concludes:

If we sum this up we have a movement from "theme" to "no theme" to "theme" to "no theme" to "theme", and so on: A-B-A-B-A..., or perhaps A-B-A-C-A ... This may look like a circular pattern; but the meaning and the corresponding experience are totally different. There is no real "otherness" in the "no theme" sections, we are never actually taken away from the theme; and most important of all, nowhere will the repetition of A be experienced as closing a circle, answering a need for symmetrical complementations. These repetitions lead us on and on and on, never back. It is clearly a chain form.

If we consider the Prelude and Fugue as a whole and compare it with the structure of a sonata we notice the corresponding difference. The two pieces do not form a symmetrical super-structure; they are not mutually complementary halves of one larger whole. The Prelude, as the word says, is a piece of music preparing for and leading up to the Fugue. Here, too, the sense of the succession is advance, not return.

(One function of every prelude is certainly to establish a definite dynamic center, so that the lonely voice that opens the fugue will be met by an ear prepared to understand the dynamic quality of its first tone.)¹

This is a beautifully balanced account pulling together the previous analysis to show the reader the Symbolic Mode and its notion of value and the Systematic Mode in the Prelude and Fugue as a whole. At the very end he returns us to our source - the Sensory with the phrase 'the dynamic quality of its first tone.'

Summary

Further work in this area may help to fill out the claim made by some writers in Part One that creativity involves a return to primary processes and show more clearly how, through composition, the composer draws on earlier experiences. This could illuminate the work of schemes that enable practising composers to work with pupils in schools. The use of the spiral in the area of musical criticism could help teachers in the encouragement, development, assessment and evaluation that now have to find a place in the composition curriculum.

1. Zuckerkandl, V., op.cit., p.94

APPENDIX THREE

The Analysis of the Children's Compositions

Methodology

The child's first interest and indeed the basic interest underlying all music is timbre. The child is first interested in what the instrument sounds like and some compositions were simply a shake on a tambourine or one beat on a drum - just an attempt to see what sound the instrument will make. Others by older children showed a more sophisticated exploration of timbre, like a systematic exploration on a drum-scratching the surface, using finger patterns and so on. Included, in the number of pieces having this element, are those pieces where it is the only element present and those where it is of significance or the main element present.

In the area of dynamics there was a technical problem insofar as the tape recorder in use had a built-in volume control on the microphone so judgements made when listening were dependent on the notes I made while taping the examples and listening for the changes in the microphone level. Some pieces were loud, soft or moderately loud throughout, others had sudden changes in their course, while others showed a gradual change (this demanding more technical control than the others). The presence of accent was also noted.

In the area of pulse two aspects were studied. The first was the presence or absence of a steady pulse. The compositions were classified as having or not having a steady pulse or having one intermittently. The second was speed and although no external source

was used to set the examples the norm was about MM80. Again not only were the compositions analysed as being fast, slow or at a moderate speed but gradual changes of speed were noted as well. In some group pieces slow and fast rhythms were present simultaneously.

The area of metre is clearly bound up with pulse. Again the pieces were classified as having no metre, having metre, or having metre intermittently or hints at a metre. The pieces were classified as being in 2, 3, 4 or other metres.

Duration links with pulse and metre. Compositions were classified as having no variation in duration or as having some intermittently. This last category clearly links with the group of pieces that had a steady pulse present intermittently. Pieces containing variation in duration were divided into those which had two note values only present and those with a greater variety. There was a further category in which the shorter note values appeared to arise randomly from the uneven alternation of sticks on a pitched percussion instrument. Taking MM80 as the crotchet beat the shorter note values were described as quavers. It was often difficult to decide whether the longer notes were minims or a crotchet followed by a crotchet rest, because of the lack of sustaining power of some of the percussion instruments. The presence of dotted rhythms (although some of these are difficult to distinguish from some of the preceding categories) and the presence of syncopation (only present in the compositions of the older groups where the pulse is definitely established) were noted.

The emergence of phrase was noted, again classified as being not present, intermittently present and present. (This often linked up

with the presence and emergence of metre.) In older examples the examples of phrases were further divided into 2 bar, 4 bar, and other.

In the area of form the classification was long and rather formless, long and shaped, of moderate length (meaning about 8 beats long) and short. The presence of a clearly defined opening was noted. This was often a glissando. A clearly defined ending was also noted, and the form it took, which varied, - a glissando, getting slower, maracas tapped together, a sense of finality in the pitch pattern chosen.

In the area of pitch the features noted varied from one age group to another. In the youngest age groups the choice of notes often appeared random (this often being linked with the alternation of two sticks on the pitched percussion instruments). Older children started to shape phrases, first in the composition on the three chime bars and then on the other pitched instruments. The presence of glissandi, trills and tremolos, repeated notes, the use of the extremes of the instrument were all noted. Those pieces that consisted primarily of going up or down the instrument in scales and those that went up or down by leaps were distinguished. In older age groups there was also the use of melodic variations. Other compositions were classified as being tonally shaped which might mean in the pentatonic, major or minor scales (these being the scales available on the pitched percussion instruments). In the song category the range used was also noted, and also whether the tuning was vague.

In the area of combining sounds, compositions of the younger age groups were usually simply a combinations of timbres with no further instructions. The presence or absence of instructions was noted.

In older age groups the presence of the 'layer' method (one person starting, then another being added and then another and so on) was distinguished and the use of ostinato patterns. Whether there was a clear start and finish was noted. There was noting of the use of two sticks together on the pitched instruments to create harmony.

Whether the child could repeat his/her piece was recorded. Sometimes this was done exactly, sometimes almost. Sometimes it was refined. Sometimes just the basic ideas were repeated - so that a piece that included scales, glissandi and tremolos might be repeated with those elements present but in a different order or using different notes. Sometimes the child said that s/he couldn't repeat it and sometimes I didn't ask him/her. This was usually when I decided it would be too difficult, as in group compositions.

Finally the composition was classified according to the highest level on the spiral that it reached. (The results of this classification have already been given in Figure 4.) In the following description each piece is given this classification to enable the reader to share in the judgements that I made.

Results of the Analysis

These can be seen on the following tables and examples of each age groups are given in the ensuing descriptions. Figures in the tables are percentages to enable comparisons to be made even though the number of compositions in some categories was quite small.

Figure 6

Table of Results of Tape Analysis

(Figures are percentages)

Age	Timbre main interest	Dynamics						Pulse			Speed						
		Loud	Moder- ate	Soft	Sudden Change	Gradual Change	Accents	Present	Inter- mittent	Not present	Fast	Moder- ate	Slow	Gradual Change	Sudden Change	2 presen simultan eously	
3 yrs	63	28	68	4	4	0	0	20	44	36	52	44	0	4	0	0	
4 yrs	27	21	58	10	5	6	1	34	30	36	21	63	5	11	0	0	
5 yrs	34	6	64	2	2	18	8	36	62	2	8	58	2	26	6	0	
6 yrs	32	12	74	0	4	4	6	66	24	10	8	74	4	10	4	0	
7 yrs	12	6	90	4	0	0	0	63	33	4	30	60	6	4	0	0	
8 yrs	12	10	72	6	0	4	8	85	9	6	15	77	8	1	0	0	
9 yrs	14	11	73	6	4	2	4	89	9	2	18	76	0	6	0	0	
10 yrs	34	4	60	4	6	20	6	81	11	8	33	33	14	14	4	2	
11 yrs	33	10	58	2	11	9	10	78	13	9	21	49	15	6	4	5	

Figure 6 contd.

Table of Results of Tape Analysis (Figures are percentages)

Age	Metre								Duration							
-	Present	Inter-mittent	Not present	in 2's	in 3's	in 4's	Mixed	6/8	Varia-tion present	Varia-tion inter-mittent	Varia-tion not present	2 note values	More than 2 note values	Dotted rhythms	Synco-pation	Alternating sticks
3	4	2	94	2	0	2	0	0	16	12	66	16	0	2	0	10
4	9	14	77	4	1	10	8	0	20	30	50	22	10	6	0	9
5	10	16	74	4	0	18	2	2	64	16	20	41	33	18	2	6
6	35	20	45	3	0	46	4	2	75	8	17	48	27	8	2	10
7	48	20	32	0	2	62	4	0	56	18	26	50	6	8	6	0
8	80	8	12	30	6	42	10	0	90	8	2	82	26	8	4	0
9	90	6	8	40	2	50	2	2	84	4	12	60	28	28	4	0
10	80	10	10	39	2	45	4	0	90	0	10	69	21	12	24	0
11	73	17	10	34	3	39	3	1	91	5	4	39	57	27	22	0

Figure 6 (contd.) Table of Results of Tape Analysis (Figures are percentages.)

Age		Phrase					Form						
		Present	Inter- mittent	Not present	2 bar	4 bar	Other	Long rambling	Long Shaped	Mod- erate	Short	Beginn- ing	Ending
3		0	0	100	0	0	0	10	0	40	50	0	2
4		11	11	78	19	9	4	44	7	31	18	1	7
5		11	13	76	19	2	2	80	8	8	4	0	8
6		45	6	49	33	6	12	65	23	8	4	0	12
7		58	18	24	58	10	8	28	26	40	6	0	12
8		86	6	8	70	15	7	15	50	27	8	0	16
9		88	2	10	56	21	13	12	66	8	14	0	10
10		88	2	10	34	32	24	13	74	13	0	20	34
11		90	6	4	61	25	14	4	64	31	1	7	97

Figure 6 (contd.) Table of Results of Tape Analysis (Figures are percentages)

Repeat							
Ages	Could	Almost	Refined	Worse	Repeated idea	Couldn't	Not asked
3	15	5	21	7	21	0	31
4	5	2	22	24	29	8	30
5	5	1	21	0	28	17	28
6	4	3	31	3	31	11	17
7	25	4	10	6	33	8	14
8	36	4	12	8	18	6	16
9	24	2	14	2	24	8	26
10	29	3	7	2	20	19	20
11	27	14	6	0	7	23	23

Figure 6 (contd.) Table of Results of Tape Analysis (Figures are percentages.)

Ages	Pitch (Instrumental)												
	Random	Use of scales	Up/down in jumps	Alterna- ting sticks	Trills/ Tremolos	Glissandi	Repeated notes	Interest in extremes of instru- ment	3 note shaped	Longer reflec- tive patterns	Shaped tonally	Melodic varia- tion	Sequence
3	84	16	8	10	4	8	12	16	0	2	0	0	0
4	44	33	18	25	9	17	56	6	0	31	0	0	0
5	16	24	24	24	24	20	60	28	4	44	0	0	0
6	8	16	0	20	24	28	36	12	4	20	2	0	0
7	12	16	0	0	8	4	24	4	20	20	1	0	0
8	4	8	4	0	4	4	16	0	44	32	16	0	0
9	0	20	16	0	0	8	40	8	32	56	28	24	0
10	0	20	4	0	0	28	36	16	44	76	36	44	4
11	0	20	0	0	4	30	38	10	64	70	64	60	4

Figure 6 (contd.) Table of Results of Tape Analysis (Figures are percentages.. Although the number of compositions involved is small, results are given as percentages for comparison.)

Age	Combining Sounds							
	Sound qualities only	Instructions given	Ostinati	Layer method	Beginning Ending	Drones/pedals	2 sticks together	Other
3	No examples							
4	100	0	0	0	0	15	10	0
5	100	50	0	0	0	15	15	0
6	100	15	0	15	0	0	0	15
7	40	100	50	15	15	0	0	15
8	30	70	65	50	40	0	0	0
9	25	100	100	100	50	10	10	0
10	25	100	75	75	65	15	30	0
11	0	100	100	75	75	0	40	0

Figure 6 (contd.)

Table of Results of Tape Analysis (Figures are percentages .
Although the number of compositions involved is small,
results are given as percentages for comparison.)

Age	Range of vocal melodies											
	1 note	2 note	3 note	4 note	5 note	6 note	7 note	8 note	9 note	10 note	Other	Vague Tuning
3	25	0	0	25	0	25	0	0	0	0	25	100
4	3	6	9	3	14	41	9	9	3	3	0	90
5	10	0	0	15	25	40	0	0	0	0	10	50
6	0	0	13	13	13	13	22	13	0	0	13	60
7	0	0	10	0	10	40	30	10	0	0	0	75
8	0	10	20	10	0	30	20	10	0	0	0	50
9	0	10	20	10	0	30	0	10	10	0	10	50
10	0	0	0	10	20	40	10	20	0	0	0	20
11	0	0	21	7	22	7	14	7	22	0	0	20

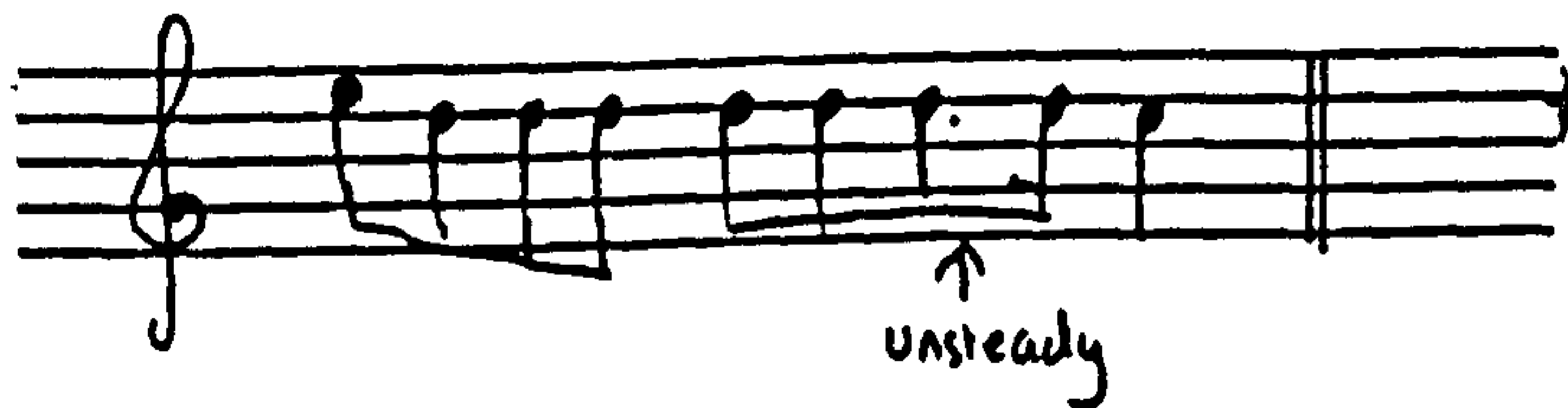
Three year old Composition

An interest in timbre seems to motivate all the compositions and is the main feature of a majority of them. It includes pieces like a maraca shake that sounds as if he is experimenting with how to play the instrument (Sensory) and a triangle exploration that also shows that she has not managed to grasp the technique necessary to play it (Sensory). The pieces on the pitched instruments are more explorations of their timbre than of their pitch (Sensory).

In the area of dynamics most of the compositions are at a moderate level but about a quarter are loud. Both soft and loud pieces are performed with an obvious delight in the sound (Sensory).

In the area of pulse the majority of examples have a sense of pulse present intermittently. There seem in many examples to be an attempt at it that failed and occasionally succeeded. Most of the examples are fast, this short xylophone piece being typical (Manipulative):

Music Example 66:



Few examples contained any variation in speed.

Hardly any examples contained any sense of metre. A very few pieces show the beginning of it, like this one note chime bar piece (Manipulative) :

Music Example 67



Music Example 69

and this maraca piece (Manipulative):

Music Example 70

Few pieces have any sense of ending. This maraca piece ends with the maracas being tapped together (Manipulative):

Music Example 71

then into an uneven pattern ending with the tap together.

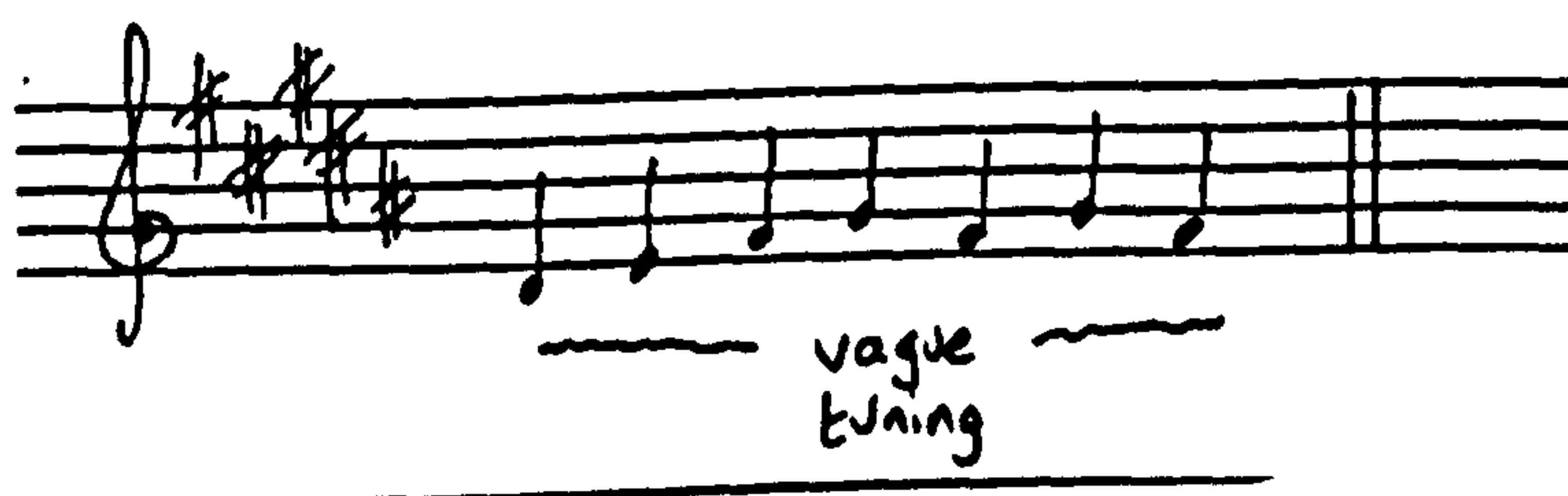
In terms of pitch most of the examples appear to be at random. In many of the examples mechanical patterns seem to have dictated the pitch, like the alternation sticks on the pitched instruments, the use of scales, the interest in the extremes of the instrument and repeated notes like this xylophone piece (Manipulative):

Music Example 72



Some pieces use a limited number of notes like this song (Manipulative):

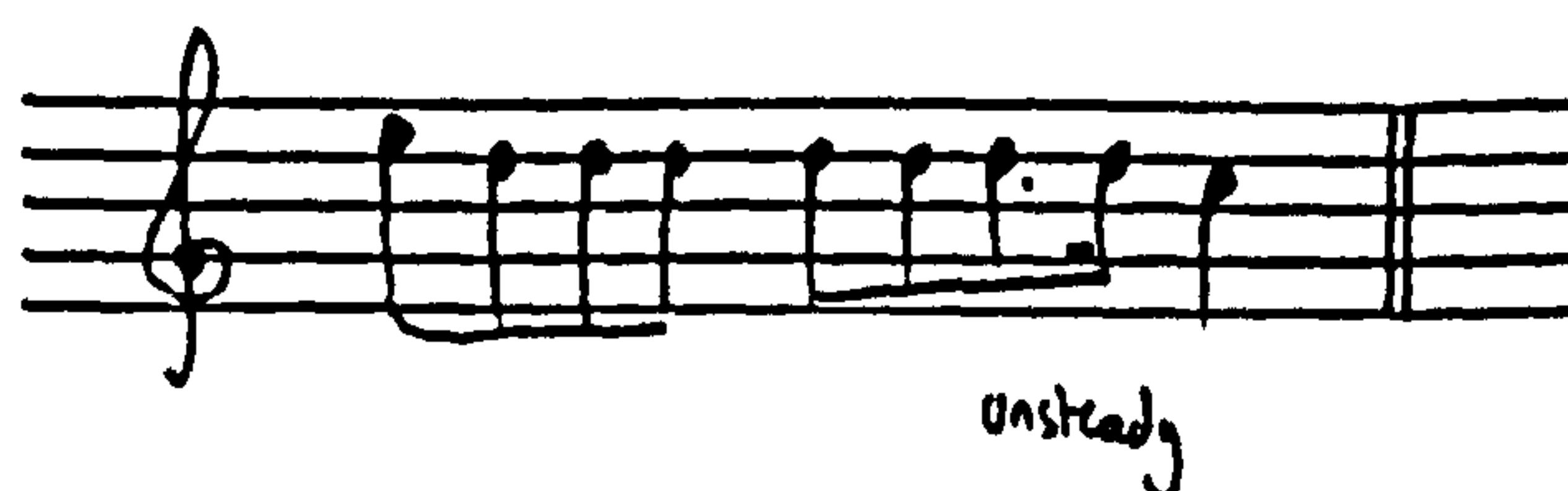
Music Example 73



Some use only one. The range of the vocal melodies varies. Some are just whispered. In all the songs the tuning is vague.

No one took up the offer to combine sounds.

Few could repeat. These were in general the shorter. Most repeated the basic idea or refined it. For example, this xylophone piece (Music example 66) (Manipulative):

Music Example 74

became:

Music Example 75

Sometimes the beat is steadier on the repeat like this tambour piece (Manipulative):

Music Example 76

which becomes:

Music Example 77

Many of the examples show the interest in the sound characteristic of the Sensory Mode. Some of the examples show an attempt to master a steady pulse typical of the Manipulative Mode. Most of the examples quoted show this mode as it is almost impossible to notate the Sensory Mode examples.

Four year old Compositions

In these compositions the songs differ markedly from the instrumental pieces. Chief among the the differences is the increased incidence of phrase structure which in turn leads to more examples being in the Personal Mode. This may well be due to the necessity in song to take a breath and to have clearly defined places to do so. The expressive character may also be due to the directness of expression in song leading to a more clear emotional character. A further factor in this is that 16 of the examples were collected in one session from a girl aged 4.9. It was a particularly prolific day for her and she seemed to draw inspiration from both likely and unlikely sources from pirates and clowns to the curtains, light, heater and bass drum which led to this long meditation which was acted as well (Personal):

Music Example 78

Big bass drums are ve-ry fat like Fat peo-ple are
 too fat fat fat When they are walk-ing a- bout people
 Peo-ple say that mar-bles When the ships are gone and dirt-y.
 When we give our ships they're so When we like a
 snow-y so The mar-bles are liked to go

Timbre still remains a very basic interest particularly in the instrumental compositions. There is, however, a decline in the number of pieces in which it is the only interest. In one long piece with an uneven beat the girl hit the wood of the drum (Sensory). In an Autumn piece a pair of plastic cymbals are sometimes clicked together, sometimes rubbed together (Sensory). The scraper is some tapped, sometimes scraped. (Sensory) in a fast long unsteady pulse pattern. The task with the maraca calls forth some careful exploration of timbre. One (Manipulative) shows a steady beat leading to a continuous shake. Other pieces use the maracas sometimes together, sometimes separately (Sensory) and sometimes

knocked together. This long piece illustrates this (Personal):

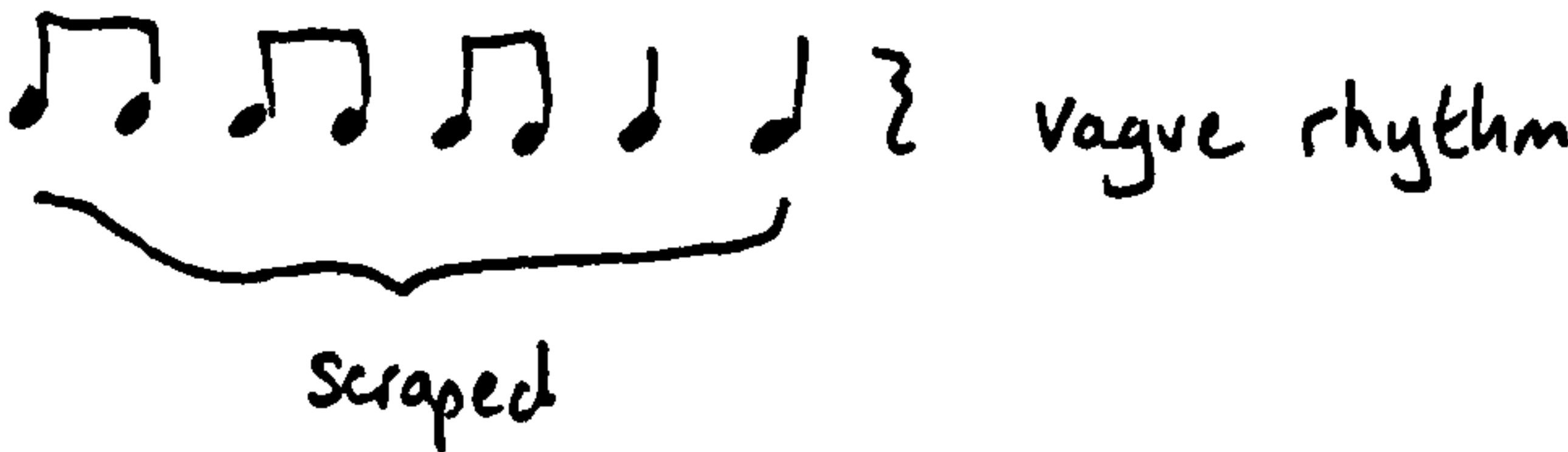
Music Example 79



Then a long passage of steady beat sometimes knocked together, louder and softer in middle, slower at the end.

The tambour too provides a fruitful field for timbre exploration some experimenting with rubbing the hand over the surface (Sensory) some combining this with experimentation with using the hand flat and in a fist (Sensory). Others are more sophisticated like this one for wooden agogo which shows rhythm and timbre being explored together (Manipulative):

Music Example 80



The pattern is repeated and varied each repeat. She is fascinated by the tone colour of the scrape. On the pitched instruments too pure timbre explorations are quite common. A xylophone piece (Sensory)

shows passages of random pitch alternating with glissandi. Some of these, as in the three year old pieces are attempts to come to terms with the technique needed to play the instrument.

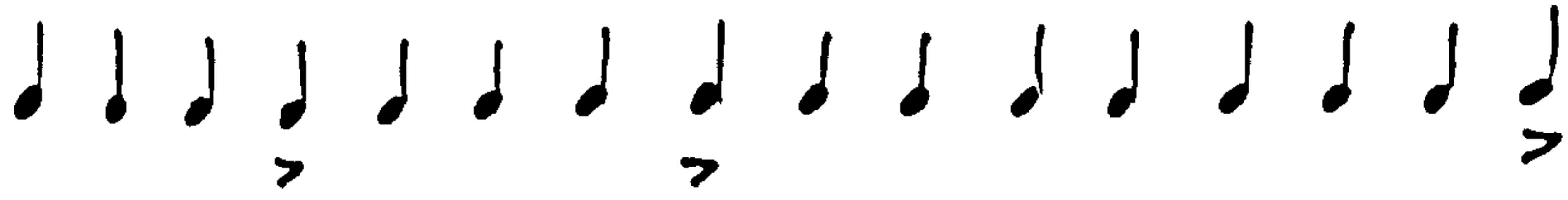
In the songs there is the use of both singing and chanting and inflected speech. Some examples are long stories semi-spoken like one about a dog in the snow (Manipulative), while others contain spoken words and sung ones (Personal):

Music Example 81

Cyn-dal bars ore ve-ry big. Cyn-dal bars are ve-ry good.

When we love to go and eat eat gum gum gum gum

In the area of dynamics half the pieces were of a moderate volume with a quarter being loud. Some of the soft pieces are songs where shyness played a part but on an instrument these pieces, as at three years, were often accompanied by a sense of delight in the quality of the sound. An increasing number showed variations in dynamic level. Some are linked with the timbre explorations and other with speed variations like a bass drum piece which contained hitting the wood deliberately and a crescendo and accelerando in the middle before ending with slower ones (Personal). Maraca shakes are often varied in speed and volume (Personal). This maraca piece shows clearly the emergence of expressive character in its dynamic variation and accents (Personal):

Music Example 82

Pulse pattern continues with irregular accents there are 4 *crescendi* and *accelerandi* with the biggest climax at the end.

The examples are almost evenly divided between those with a pulse, those with it present intermittently and those with none. The majority of the songs had it present like this one (Personal):

Music Example 83

Snow comes down in a ve-ry high cloud, A ve-ry high cloud, A

ve-ry high cloud. Snow comes up in a ve-ry high cloud, ve-ry high

cloud

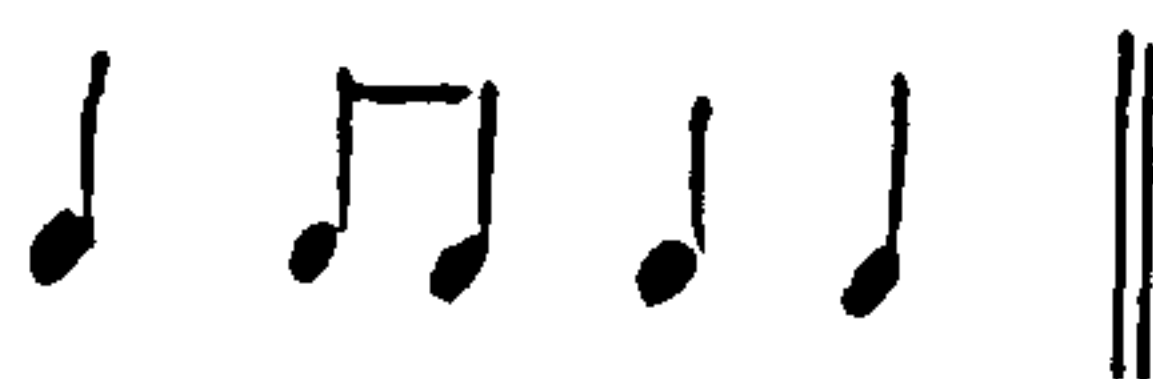
In others the child pauses for thought giving an irregular pulse
(Manipulative):

Music Example 84



In the instrumental pieces many are a succession of steady beats like a 20 beat tambour pattern (Manipulative). Sometimes the speed changes shook the grasp; at other times it is experimentation with longer and shorter notes like an unsteady bass drum pattern that becomes on repeat (Manipulative):

Music Example 85



Few examples contain clear examples of metre and these are largely songs possibly because of the word rhythms as in this example (Personal):

Music Example 88

Birth-days, birth-days, EV-ry-bo-dy gives us pres-ents
to my-self a day a day wha day, day, day, day, day.

Many of the examples like this vocalised example are in four (Personal):

Music Example 89

gliss.

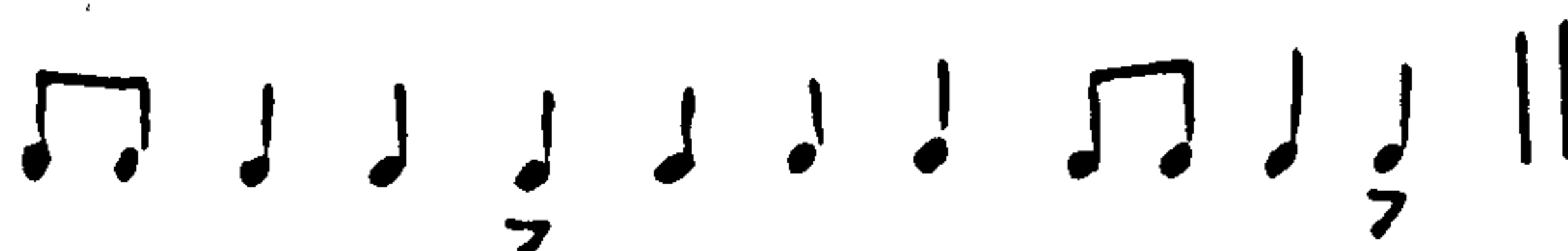
In some the metre varies (Personal):

Music Example 90

Sharks are ve-ry strange and big. They want to eat some-thing for their dinner,
eat bumps. Their mouth is too big and they want two sharks to bite

In the instrumental pieces there are examples of its emergence like the accents in this tambour pieces (Personal):

Music Example 91



The maraca piece already quoted (Music Example 79) shows it too in its use of rests. In others a metric pattern emerges from a less steady patterns as in a tambourine piece which starts as pure timbre exploration and:

Music Example 92



emerges at the end (Manipulative). Sometimes repeated notes have a metric feel. One short example (Sensory):

Music Example 93

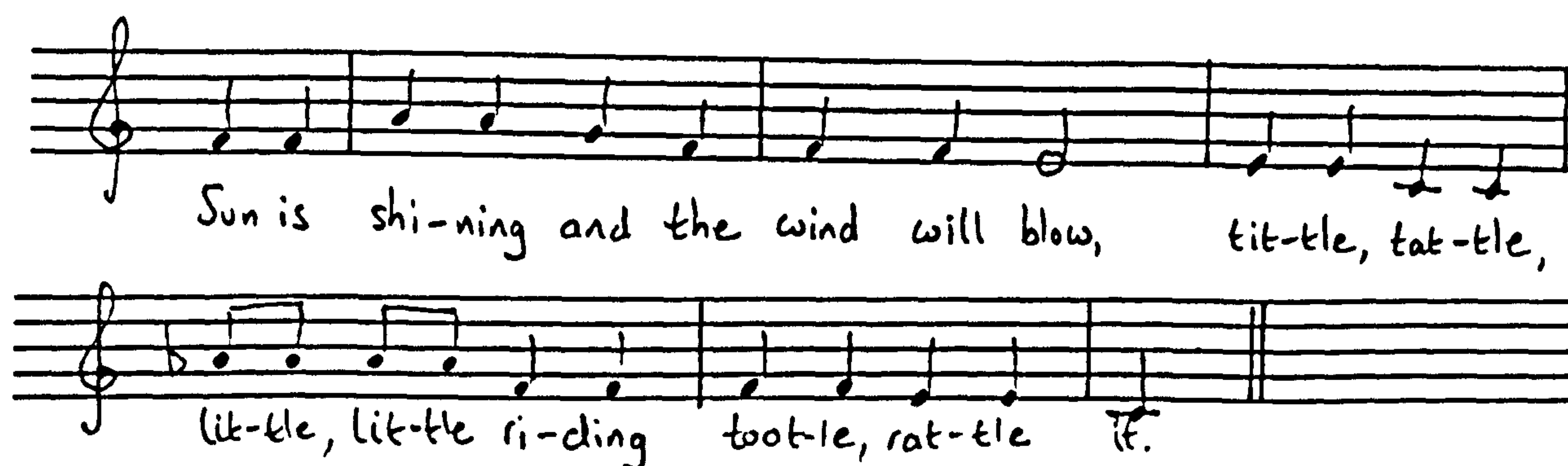


shows the short pattern which in later ages is going to be put in first pairs and then in longer notes to make metric patterns. This is as it were one building brick in a metric pattern.

In terms of duration more examples contained variation. Many of the examples in which it is present are songs like the Snow Song already quoted (Music Example 83) which also shows the use of dotted rhythms.

There is much greater skill and sophistication in the handling of note values in the songs than in the instrumental pieces. This may be due to the influence of word rhythms, although sometimes the words appear to make little sense or are nonsense syllables, like this one which starts off as a sentence and ends in nonsense (Personal):

Music Example 94



Examples of intermittent variation in dynamics are found in the instrumental pieces. Some have already been quoted (e.g. Music Example 79). Some are linked with repeated notes, others emerge from the alternation of sticks like a gato drum piece that starts as a steady pulse with the two sticks together and then with each stick separately and at the end becomes (Manipulative):

Music Example 95



A pattern for the chime bars starts as an uneven pulse with several mishits but ends with this pattern (Manipulative):

Music Example 96



There is an increase in the number of pieces with phrases present or intermittently present. This is at its clearest in the songs and can be seen in several of the examples quoted (e.g. Music Example 81.) Some are in two or four bar phrases like the Snow Song (Music Example 83.) Others have less usual and mixed lengths like Big Bass Drums (Music Example 78) and the Shark Song (Music Example 90.) In the instrumental pieces the idea of phrase seems to be emerging. Sometimes it is in the use of rests as in the maraca piece already quoted (Music Example 79.) Sometimes it seems to be shaped by speed and dynamics as in others of the examples already quoted (e.g. Music Example 82.) Sometimes it is in choosing a definite number of beats like these seven for tambour (Manipulative):

Music Example 97



Sometimes it appears in emerging metre. Sometimes it is in the creation of a fragment which in later stages of development will be

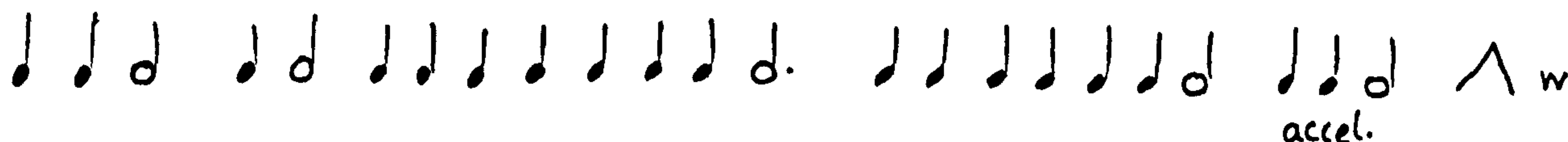
repeated to form the basis of a phrase like (Manipulative):

Music Example 98



In terms of form the majority are long and rambling or of moderate length. Typical of the instrumental pieces are long explorations of the pulse. Short pieces include a single glissando (Sensory). The songs provide the examples of the longer shaped pieces as can be seen in examples already quoted (e.g. Music Example 83.) More pieces had some sort of ending gesture. In some it is a glissando as in this metallophone piece which uses this rhythm:

Music Example 99



in a leaping tune (Personal.) Others have an ending scrape or tap. Some get slower (Personal), faster (Personal) or softer (Personal.) The songs have more clearly defined endings often coming to rest on the tonic as in the Shark Song (Music Example 90.) Some examples end with a vocal slide.

In the area of pitch there seems to be more planning although still large number of pieces appear to choose it at random. Scales are popular, a number of pieces simply going in steps from one end of

the instrument to the other (Manipulative). Going up and down in leaps with alternating sticks is common (Manipulative). Many patterns are produced by the mechanical alternation of the sticks which sometimes creates tremolos and trills (Manipulative). Glissandi are popular, sometimes as part of a general exploration of timbre (Sensory) and sometimes as an ending device (Personal). Repeated notes are very common sometimes as part of scale exploration (Manipulative). There is some interest in the extremes of the instrument. In this piece it influences the choice of starting and finishing notes in a piece that explores scale and sequences (Manipulative):

Music Example 100



Many of the pieces contain a reflective quality about them especially those using the three chime bars (Personal).

The songs show a great variety of range, six notes being most common. In most examples the tuning was vague.

In terms of combining sounds all the examples were just the combining of two timbres with no instructions as to length, when to begin and end or how to fit together. There is an exuberant piece

for gato drum and metallophone in which both players pursue their own pulse patterns regardless of the other (Manipulative). One player was told to stop by the organiser of the piece. One piece for metallophone and woodblock starts as a pulse pattern but rapidly develops into each player exploring the tone colour of his instrument on his own (Sensory). In some examples individual players used sticks together to produce harmony as in a pattern that grows out of a tremolo (Manipulative). Another struggles with the technical problem of getting the sticks together (Manipulative). One example uses a sort of upper drone the upper stick repeating a note while the lower stick explores a tune in the range of a fifth (Manipulative).

Few children could repeat their piece. These were mostly short pieces. Many repeated the basic idea such as a metallophone piece (Manipulative) with its fast beat, its random sounding notes with two sticks, its use of repeated notes all of which are present in the repeat. Many refined their pieces such as this chime bar piece (Personal):

Music Example 101



which was refined to:

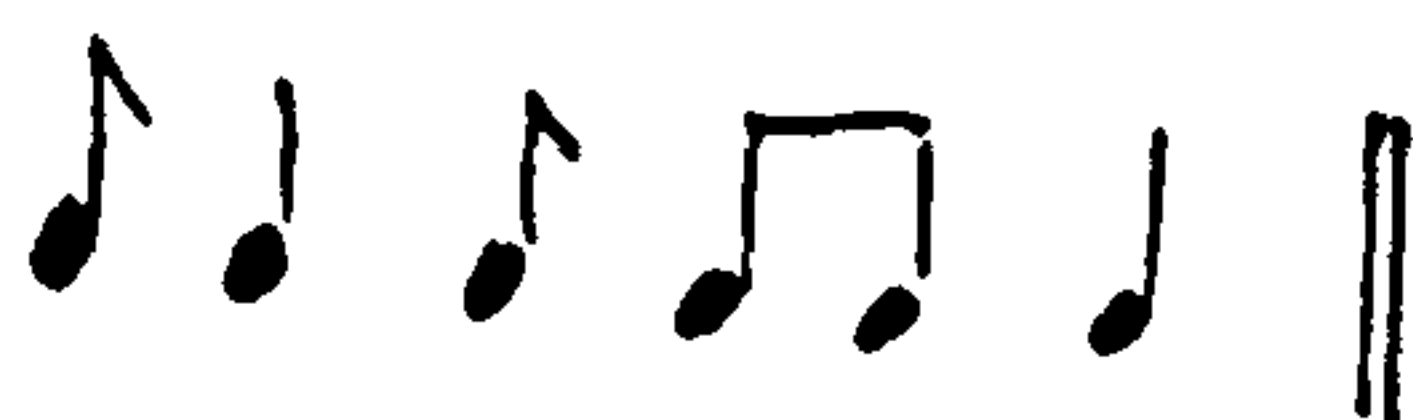
Music Example 102



Some add endings; others have a much clearer phrase structure. In

one piece a single stroke becomes (Vernacular):

Music Example 103



In several examples they said it was too long to repeat.

The majority of pieces demonstrate the Manipulative Mode with its concern for pulse patterns. However, about a quarter show the Personal Mode with its concern for the expressive. Most of the songs show this mode and many of the instrumental pieces that are concerned with changes of speed and dynamics.

Five year old Compositions

Five year olds retain their interest in timbre, with a greater awareness of its expressive quality. This tambour example is typical (Personal):

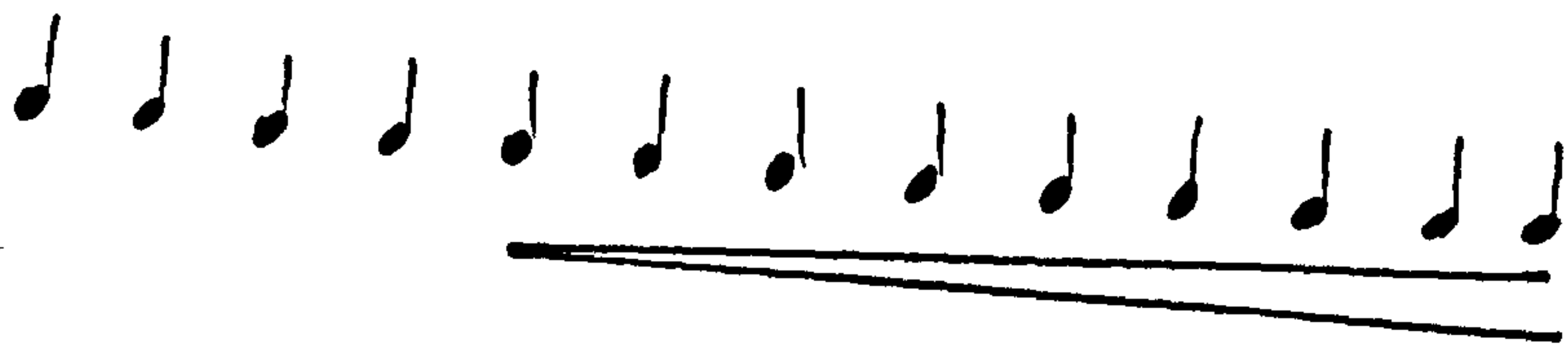
Music Example 104



in which all the quavers are played by rubbing the hand over the surface of the drum.

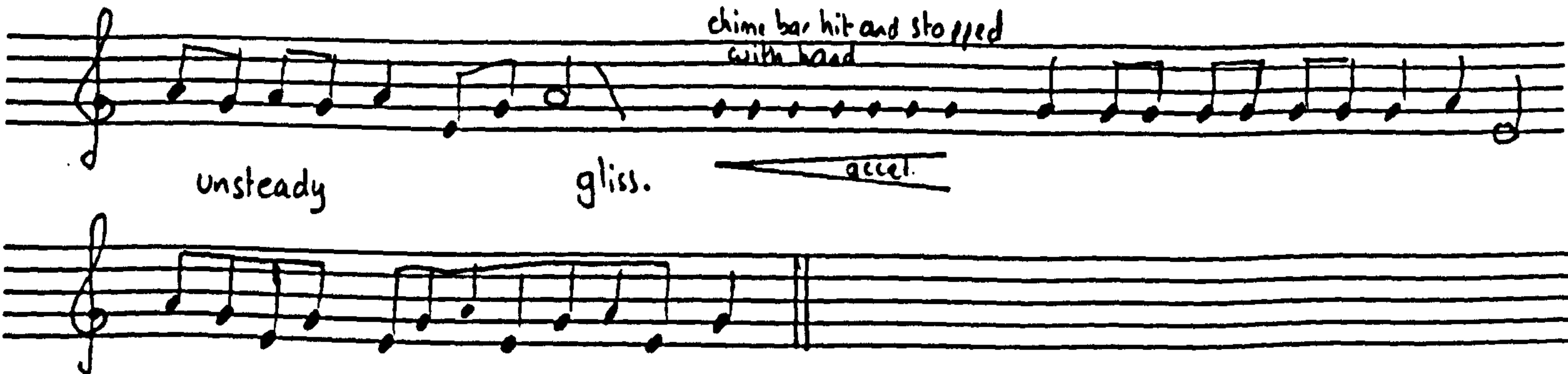
In their instrumental pieces there is greater interest in gradual dynamic change like this tambour pattern (Personal):

Music Example 105



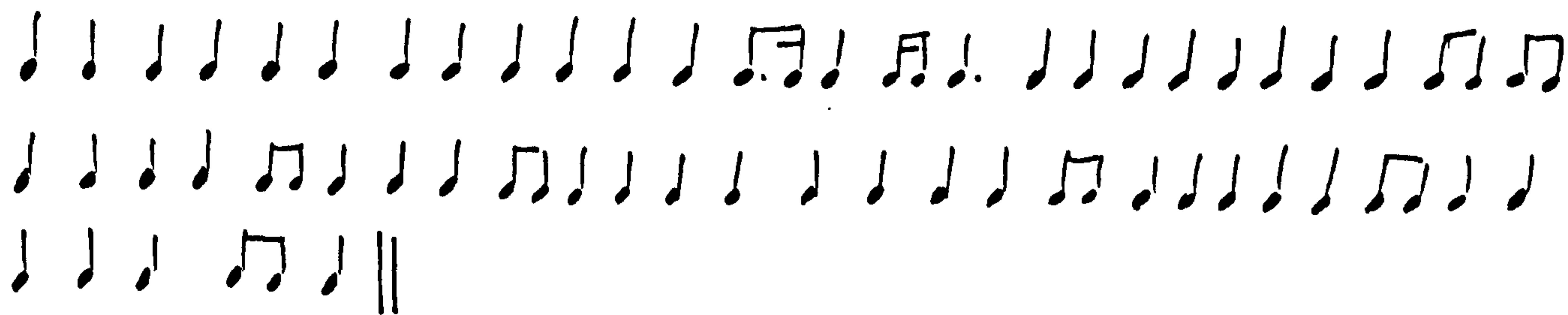
There is a greater attempt at pulse and most pieces have it present intermittently, this chime bar piece being typical (Personal):

Music Example 106



There is, however, much more variation in duration although this is often sporadic and disorganised as in the chime bar piece quoted above (Music Example 106) or this drum piece (Manipulative):

Music Example 109



This sporadic variation leads to an increase in dotted rhythms although sometimes these are deliberate as in this chime bar piece (Personal):

Music Example 110



Few examples had any concept of phrase although it can be seen emerging in this metallophone piece (Personal):

Music Example 111



This song, however, shows it clearly present, at least at the opening and in units of two bars, which is also typical (Personal):

Music Example 112

The leaves come fal-ling From the trees And I love you God.

Some leaves are pret-ty co-lours. Some are yel-low and green.

The form of the pieces is overwhelmingly long and rambling, partly because of the lack of a sense of phrase. A few pieces have a sense of ending as in the longer note values at the end of the chime bar piece quoted above (Music Example 110). Some are glissandi and some attempts at melodic endings as in this xylophone piece (Personal):

Music Example 113

In the instrumental pieces in terms of pitch there is an increasing sense of planning in the pitches used. This is particularly true of the longer reflective pieces on the three chime bars which, although still long and without a sense of phrase, often have a meditative quality about them, as in some of the examples already quoted (e.g. Music Example 106). Scale passages are common, as is going up and down the instrument in leaps often as result of the alternation of sticks as in this xylophone piece (Personal):

Music Example 114

There are a number of trill and tremolo patterns as also seen in this xylophone piece. Glissandi are also popular and repeated notes as well. There is still interest in the extremes of the instrument.

All the attempts at combining sounds are really concerned only with the sound qualities of the instrument with little more organisation than just deciding which instruments will be played. When instructions are given they are not carried out. Sometimes the alternation of the two sticks produces a pedal type effect as in the xylophone piece already quoted (Music Example 114) and there were a few examples of two sticks being used together.

In the vocal melodies a range of six notes was favoured, although sometimes within these two notes became favoured as in this example (Personal):

Music Example 115

Vague tuning

Fa-ther Christ-mas gave chil-dren some pre-sents And he came down the chi-me-lee And

then when he went down the chi-me-lee he saw some chil-dren play-ing there so

when he quiet-ly went in-to their bed-room and then he gave them some pre-sents and then

he went in-to Su-zi's room And then he gave her some pre-sents

In half the songs there were passages of vague tuning as also seen in Music Example 115.

Few could repeat their pieces exactly but many refined it or repeated the idea.

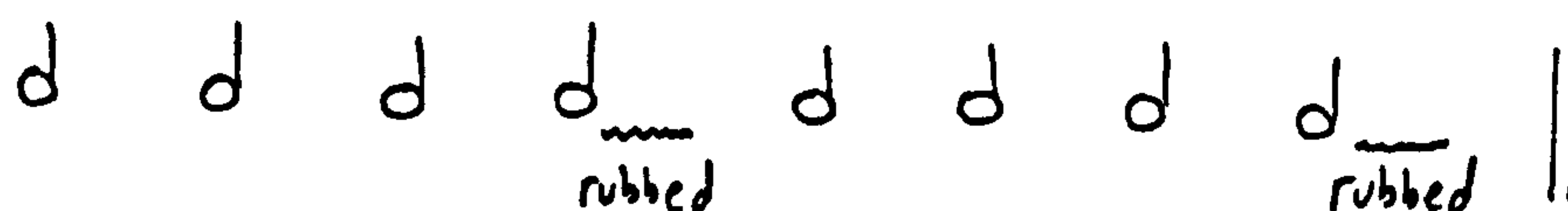
In terms of the modes there is sharp increase in the number of Personal pieces and a decline in the Sensory and Manipulative ones. These Personal pieces are particularly characterised by an interest in dynamic and speed change.

Six year old Compositions

Six year olds retain their interest in timbre as in a piece for multi-guiro (a scraper filled with seeds) in which it was shaken and scratched as well as there being various pauses following accelerandi (Personal).

Dynamic variation is often combined with timbre exploration as in this tambour piece in which the dynamic variation is created by the tambour being sometimes rubbed and sometimes struck (Personal):

Music Example 116

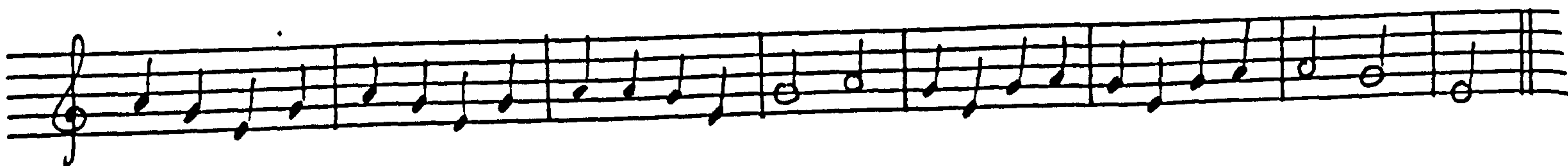


In general there is less dynamic variation than at five years which may be due to an increased interest in rhythmic patterns with the advent of the Vernacular Mode.

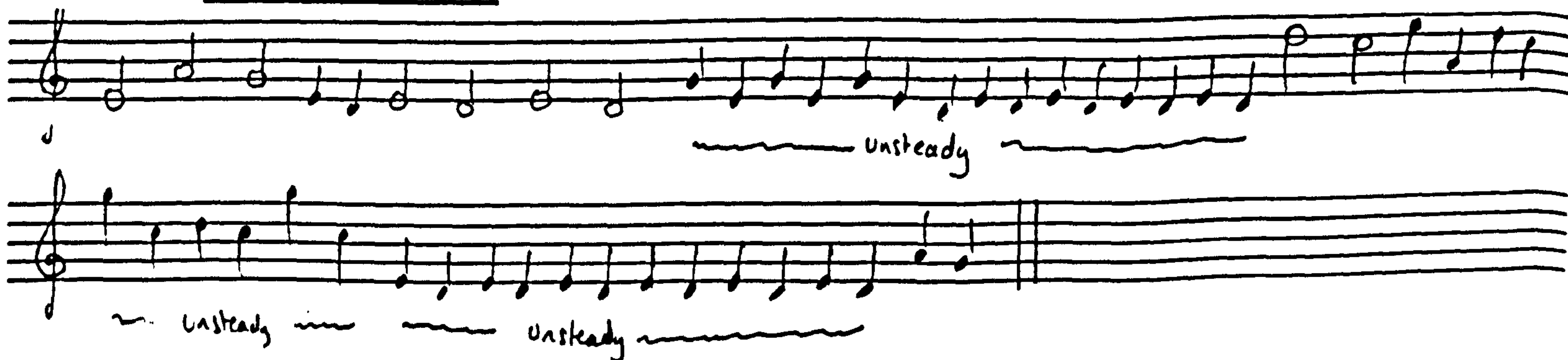
In the area of speed, however, there is still some interest in variation as in the long accelerando is this tambour piece (Manipulative):

Music Example 117

Pulse is now present in more pieces steadily, as in this piece for chime bars (Personal):

Music Example 118

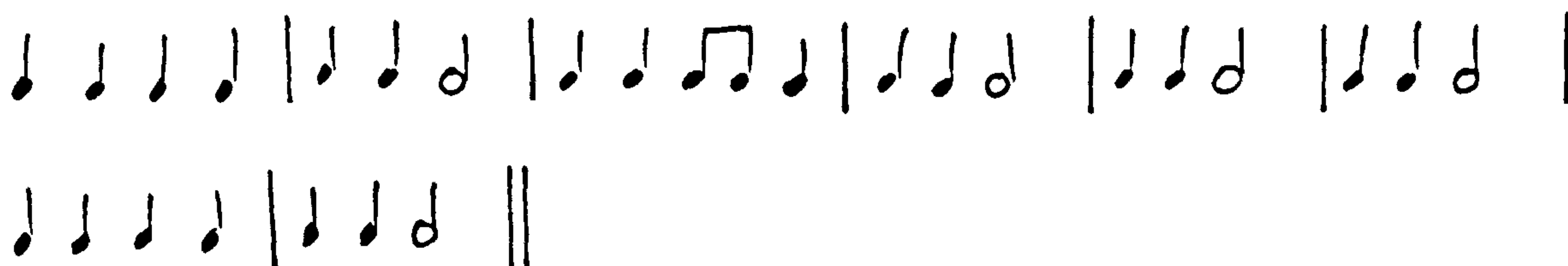
It is still sporadic in some pieces as for example in this xylophone piece when the problem is the alternation of the sticks (Personal):

Music Example 119.

In the group pieces still individual players have a pulse but there is no common pulse.

The chime bar piece quoted above (Music Example 119) also shows the increasing appearance of metre which is predominantly in fours as is this tambour piece (Vernacular):

Music Example 120



Variation in duration is now more reliably present and more organised as many of the examples already quoted show clearly (e.g. Music Example 118). There is a predominance of pieces that use two note values only, like this piece for metal agogo (Manipulative):

Music Example 121

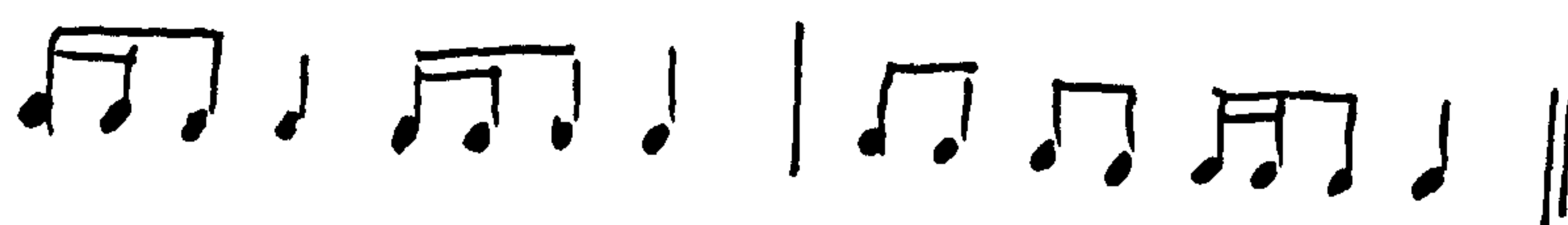


With the establishment of more order in this area the more uncontrolled dotted rhythms tend to disappear.

The more frequent appearance of metre goes with an increasing organisation into phrases. Several of the examples already quoted (e.g. Music Example 120) show a clear phrase structure and this is an

example of a well shaped single phrase for maracas (Vernacular):

Music Example 122



Again two bar phrases are most common. All the songs fell into phrases although some were irregular or unusual lengths like this one with its metre fluctuating as well (Personal):

Music Example 123

It's spring-time and it's a love-ly time and I like it. It's spring-time, it's

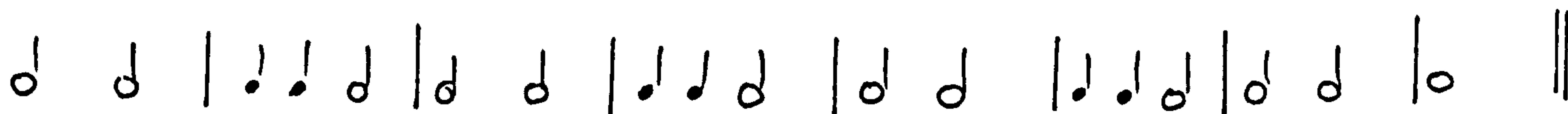
spring-time I like it so much At spring-time, at spring-time it's my birth-day

The advent of of metre and phrase leads to an increase in the number of longer shaped pieces. Still the large majority of pieces are long but they are increasingly organised as this song shows (Personal):

Music Example 124

In au-tumn leaves are fal-ling, leaves are fal-ling, leaves are
 fal-ling Leaves go brown, leaves go yellow, leaves go red in
 au-tumn. Leaves go brown, leaves go red, leaves go yellow in
 au-tumn.

There is an increase in the number of ending gestures. Glissandi are still popular but rhythmic ones appear as in this maraca pattern (which is close to the Speculative Mode):

Music Example 125

In terms of pitch in the instrumental pieces there is an increase in planned pieces. The longer reflective patterns have given way to shorter more organised pieces like this well shaped metallophone piece (Vernacular):

Music Example 126



There are, however, still pieces produced largely by the alternation of sticks like this xylophone piece (Manipulative):

Music Example 127



And glissandi and trills and tremolos are still popular. Glissandi sometimes have a structural role as in this metallophone piece (Personal):

Music Example 128



There is less interest in the extremes of the instrument.

The range of the vocal tunes lies between 3 and 8 notes with some examples of just a vocal slide being offered. About the half the examples also contained examples of vague tuning. One example was midway between speech and song.

Pieces combining sounds are still primarily combinations of tone colours only and instructions given are largely ignored. There are examples of the 'layer' method of starting (the instruments starting one after the other) and of the long line method in which the instruments play one after the other. So there is the beginning of structure in these pieces.

Again few examples were repeated exactly, most being refined or the basic idea repeated.

There is an increase in the number of examples of the Vernacular Mode although Personal examples are in the majority. The Vernacular is seen in the increasing rhythmic organisation and phrase structure.

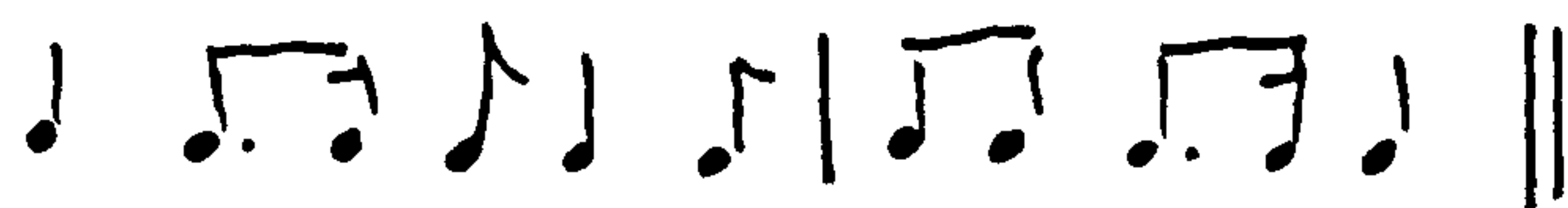
Seven year old Compositions

The interest in timbre declines sharply here as other considerations such as rhythm and phrase come to the fore. There is much less interest in dynamics as well.

Pieces with a pulse are in the majority and few have none at all. These are largely pieces which are concerned with timbre especially those in response to the programmatic task. The group pieces too still often have the characteristic that each individual member has a pulse in his pattern but there is no pulse in the group as a whole. There are still examples of pieces where the pulse is intermittent

because of the technique required for the instrument like this attempt rhythmic pattern on an Indian cymbal (Vernacular):

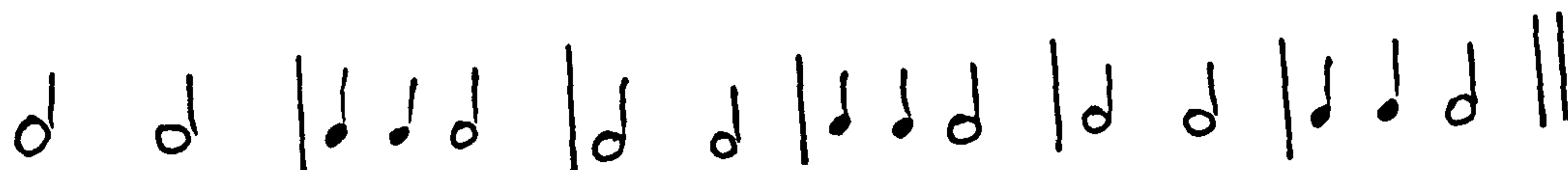
Music Example 129



Again there is less interest in changes of speed. Increased technical facility allows there to be more fast patterns but the majority are at a moderate speed.

There is a much higher incidence of metre, this example for tambour being typical (Vernacular):

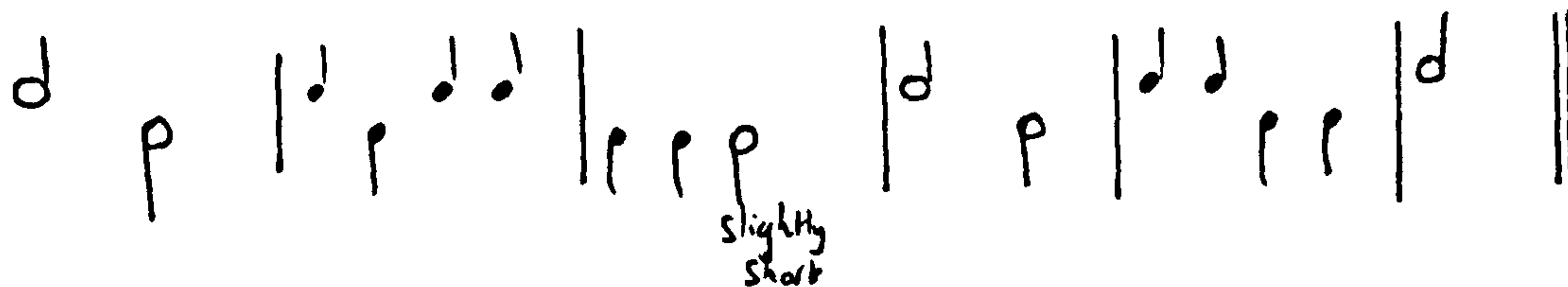
Music Example 130



Like this example the vast majority were in four time.

In terms of duration the majority have some planned variation present. This largely involves two note values only like this piece for metal agogo (Vernacular):

Music Example 131



The increase in the number of pieces in which there was no variation present is caused by an increase in pieces which are all one note value like this short metallophone piece (Vernacular):

Music Example 132



The more haphazard variation in metre produced by the alternation of sticks on the pitched instruments have completely disappeared with the advent of greater technical skill.

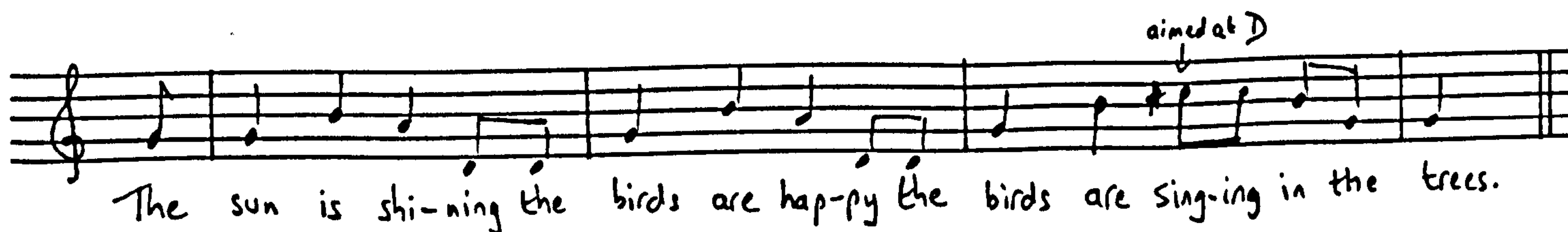
The majority of pieces now contain some concept of phrase. These are mostly in two bars as in this xylophone piece (Vernacular):

Music Example 133

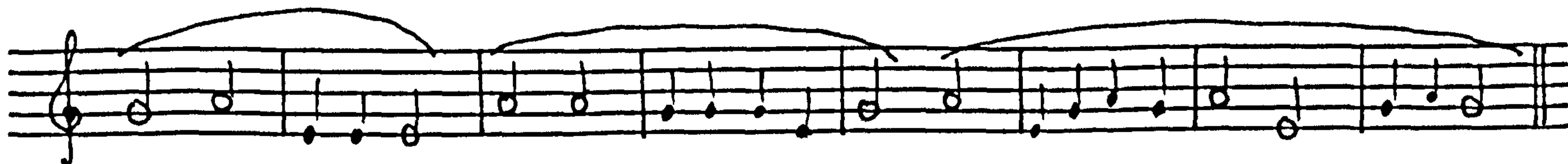


or this song (Personal):

Music Example 134



Others are more irregular as in this chime bar piece (Personal):

Music Example 135

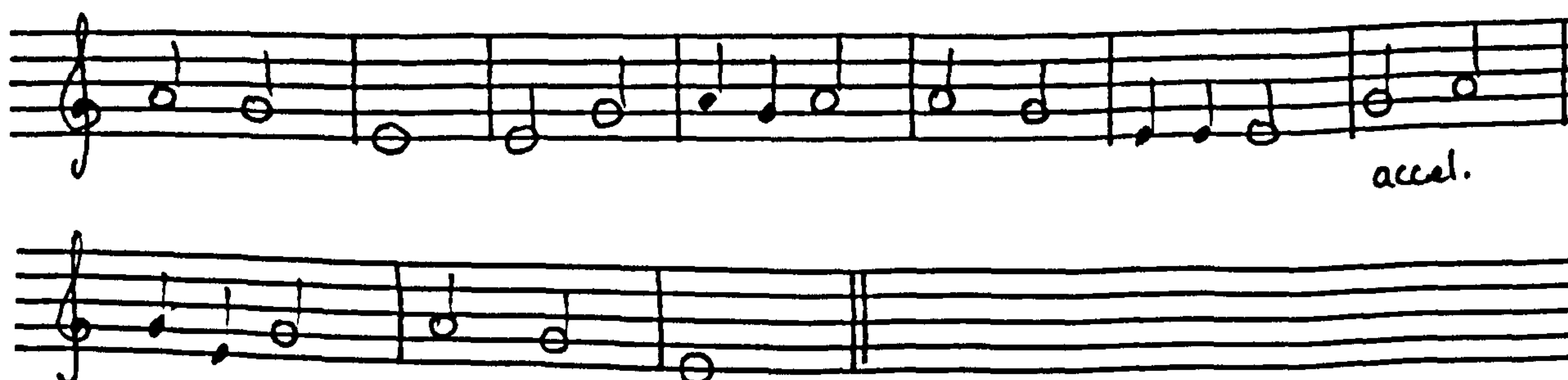
or this short song where it is combined with an unusual metre (Personal):

Music Example 136

Many are a single phrase like this maraca piece (Vernacular):

Music Example 137

With the advent of greater order the compositions get shorter, many being about eight beats long like some already quoted (e.g. Music Example 132). There are still longer pieces. Some long rambling pieces persist but there is almost the same number of organised pieces some of which have already been quoted. Endings are still appearing but glissandi have disappeared in favour of rhythmic endings like this chime bar pattern (Personal):

Music Example 138

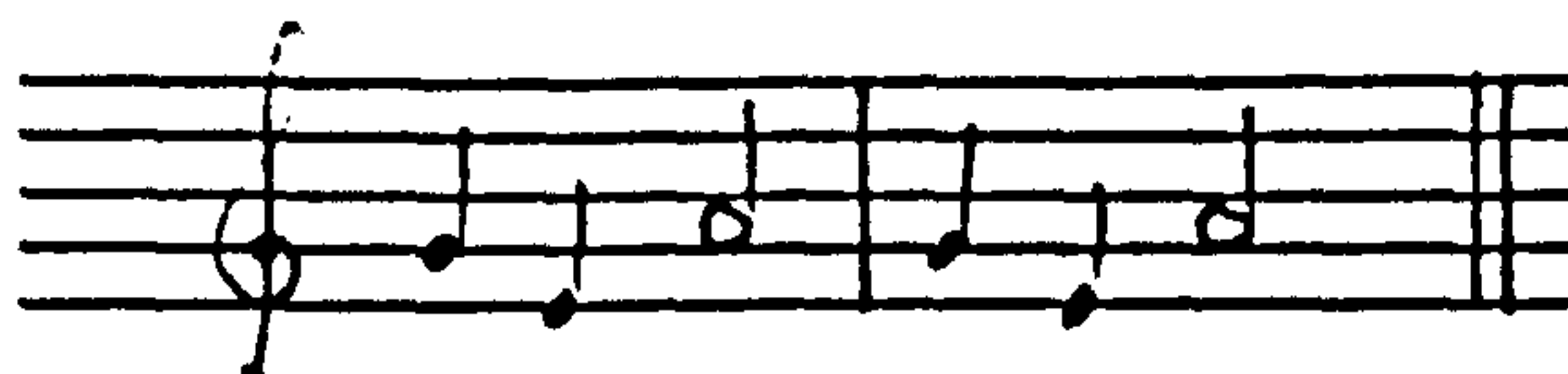
or tonal endings like this xylophone piece (Vernacular):

Music Example 139



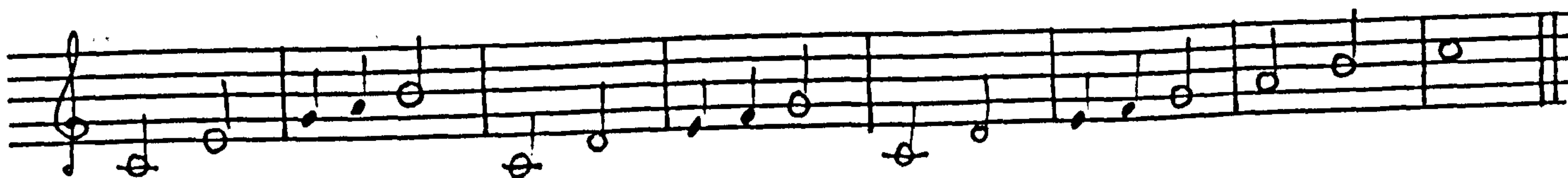
In terms of pitch few are at random and the interest in glissandi, trills and tremolos and the extremes of the instrument have declined, together with the patterns produced by alternating sticks. There is a noticeable increase in the ability to organise patterns on the three chime bars, this short pattern being typical (Vernacular):

Music Example 140

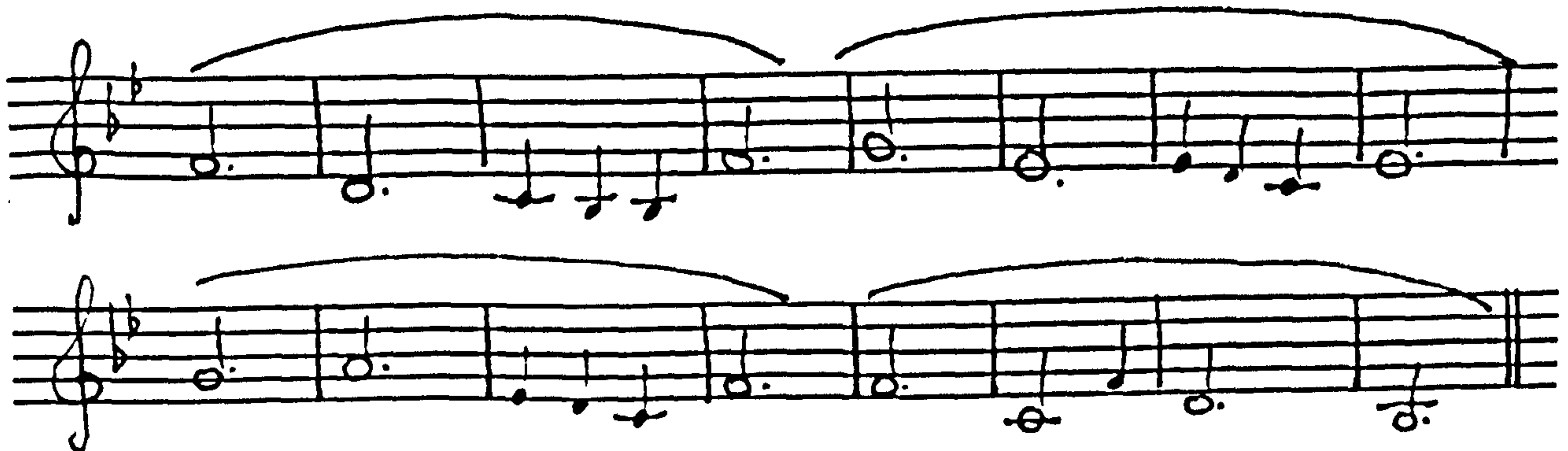


There are few examples of attempts to shape a piece tonally like this metallophone piece (Speculative):

Music Example 141



In the vocal melodies the majority employ a range of six notes and some examples are more shaped tonally like this well developed vocalised melody (Speculative):

Music Example 14.2

Some examples are based on existing tunes like the ending of the tune just quoted which appears to be Pop goes the Weasel and this one based on A Sailor went to Sea (Vernacular):

Music Example 14.3

There are passages of vague tuning in many of the examples.

In the attempts at combining sounds there are always some instructions given (although these may not be always carried out). The pieces are evenly divided between those that are still primarily a blending of tone colours and those based on ostinati. The layer method of starting is also appearing and there examples of ending gestures.

More children could repeat this piece because they were shorter and more organised. There was less refining of the idea, children being more able to realise their intention first time.

The majority of pieces in this age group display the characteristics of the Vernacular Mode with its interest in rhythm and phrase.

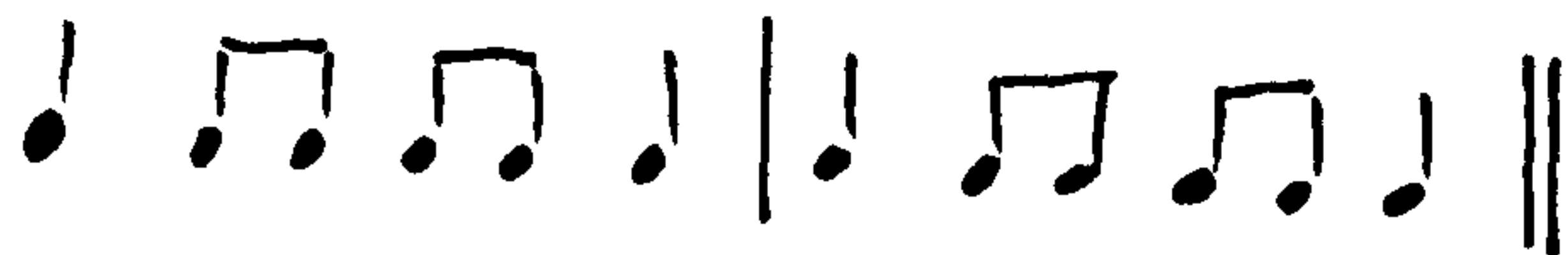
Eight year old Compositions

The decline in the interest in timbre is also apparent here. There are, however, some very sensitive examples of it like a gradual accelerando and crescendo on the claves produced in response to the task of repeating a piece around the idea of spring (Sensory). From this age upwards this task often elicits some sensitive explorations of timbre.

There are a few more examples exploring changes in dynamics and accents, these later often being in explorations of tone colour like rubbing the surface of a drum contrasted with hitting it as in the 7 year examples. One example is of an accented ending shake (Vernacular).

Pulse is now present in the vast majority of examples this tambour pattern being typical (Vernacular):

Music Example 144

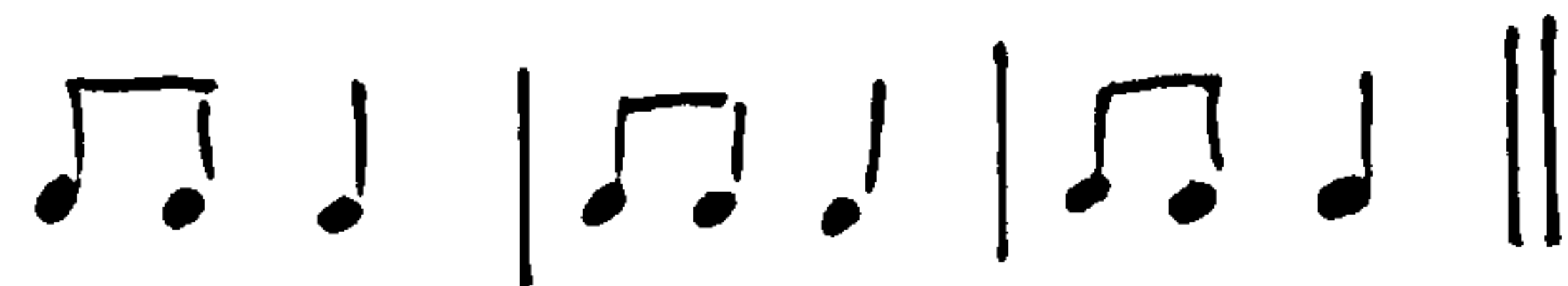


Those with intermittent pulse include again group pieces with no group pulse present and pieces where the right note was hunted for.

The speed favoured again is moderate and there is an increase in the slower examples while the faster examples decline.

With the increase in the security of the pulse comes an increase in the incidence of metre. There are now more examples in two although four still predominates. This maraca pattern is typical (Vernacular):

Music Example 145



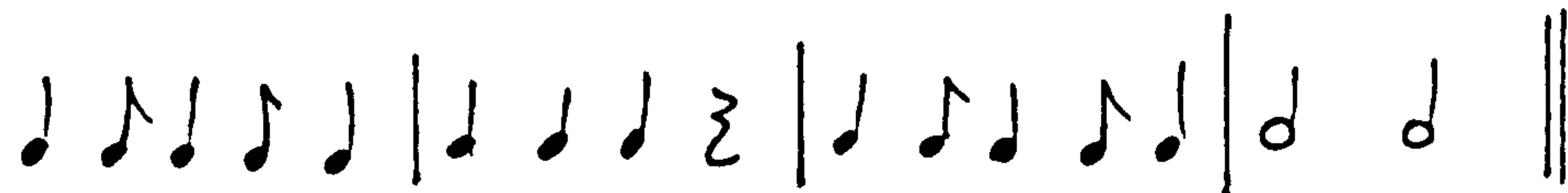
and this wood block pattern (Vernacular):

Music Example 146



This is a more complex example in four time (Speculative):

Music Example 147



The three time examples include this well shaped tune for xylophone (Speculative):

Music Example 148



There are some less usual examples like this one played very deliberately in five time on the chime bars (Vernacular):

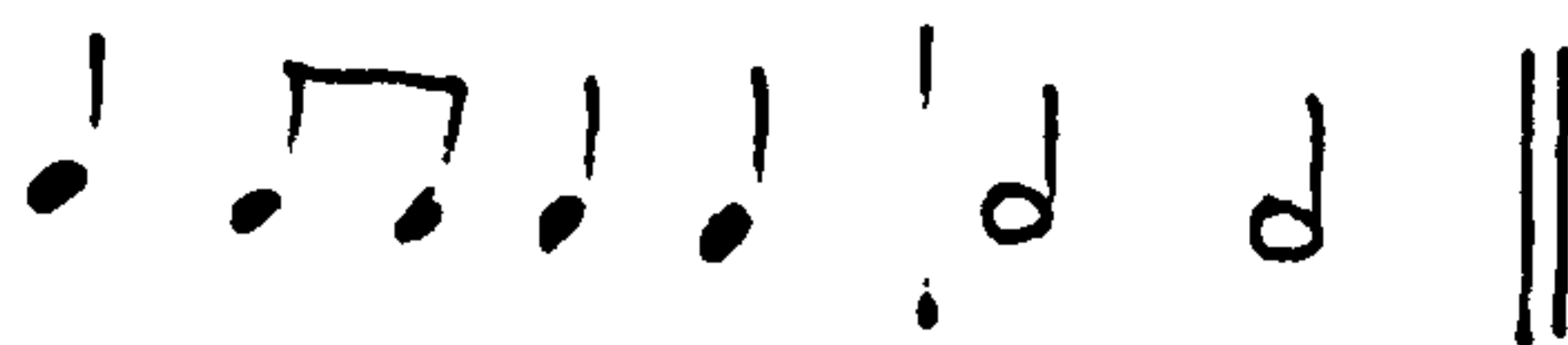
Music Example 149



The overwhelming majority of examples contain examples of variation in duration. As has already been seen this usually is planned and uses two note values only.

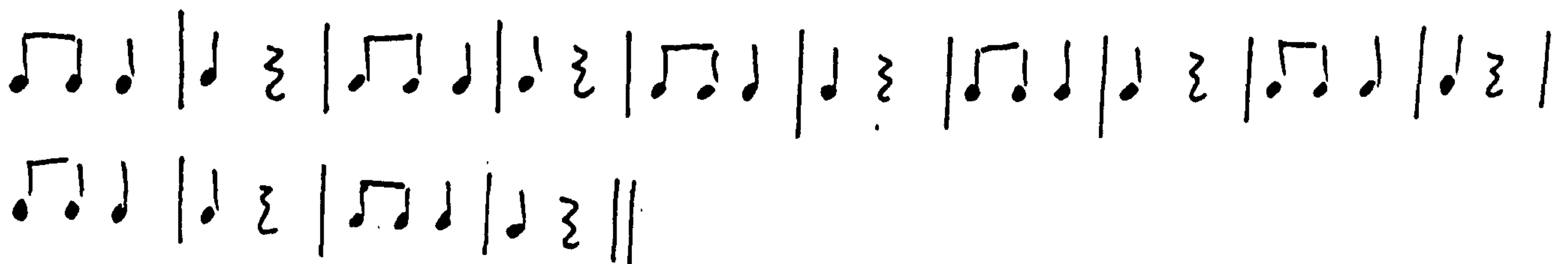
Phrase also is present in the majority of examples. Again two bar phrases predominate with many examples being a single phrase like this gong piece (Vernacular):

Music Example 150



In the area of form, long shaped pieces now predominate over the long rambling pieces. The length is often achieved by the repetition of a short fragment like this tambour piece (Vernacular):

Music Example 151



The number of endings increases many of them being rhythmic gestures like this ending crotchet (Vernacular):

Music Example 152



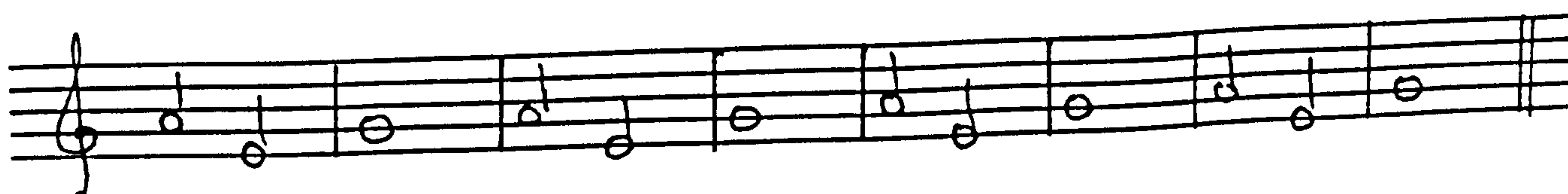
Sometimes it is a melodic gesture as in this song (Speculative):

Music Example 153

The sun is shin-ing, shin-ing, shin-ing The sun is shin-ing,
 hesitation
 shin-ing, shin-ing. The trees are green and the flo-wers have grown.

In terms of pitch the number where it appears to be random is very reduced. Most of the chime bar pieces are well shaped, often repeating a fragment (Vernacular):

Music Example 154



There is evidence too of attempts at shaping a tune tonally particularly in the ending. One example of this has already been given (Music Example 153) and here is a minor xylophone piece (Speculative):

Music Example 155

This song is very well ordered tonally. She ran out of words at the end which prevented her concluding it musically (Speculative):

Music Example 156

Spring is a-com-ing, Com-ing, com-ing. Leaves on the trees so bright and green,
blow-ing on the trees so pink and

In the range of vocal melodies again the sixth predominates, although there is a wide variety. One of the two note examples is really inflected speech (Manipulative):

Music Example 157

A bird can sing like we do

This also reflects the shyness in making vocal offerings that sets in with some children at this age. Tuning is slightly more secure.

In pieces combining sounds much fewer pieces are concerned with tone quality only. Instructions are usually given and these take the form of ostinati, although the piece seldom comes together as there is no beat given and the players cannot remember or are given insufficient practice at the ostinati. The layer method of starting is favoured and many examples have some sort of ending. A piece (Vernacular) for chimes, triangle and bells illustrates this. It is really a tune and accompaniment piece the composer leading it on the chime bars and the others accompanying. She gives a repeated note as a signal to end.

More children could repeat their compositions. This is a characteristic of the Vernacular Mode. There is less repeating of the idea for they are now able to realise it fully first time round.

This is the high point of the Vernacular Mode with an overwhelming majority of examples displaying it.

Nine year old Compositions

Still the interest in timbre is subservient to other interests. However, there are some examples that verge on the Speculative in their use of it like a maraca piece in which they are rolled on the table and shaken in phrases of uneven lengths and there is an ending gesture.

There is little interest too in changes of dynamics although there is one example of very expressive crescendi produced on the tambour with fingers then the flat of the hand (Personal).

Pulse is now mostly present and some of the intermittent examples are examples of the beginning of the Speculative inadequately realised as in this metallophone piece (Speculative):

Music Example 158



Again in group pieces there is no common pulse.

The majority of pieces are at a moderate speed with a few gradual changes. These are often at the end to provide a close. This is sometimes faster and sometimes slower.

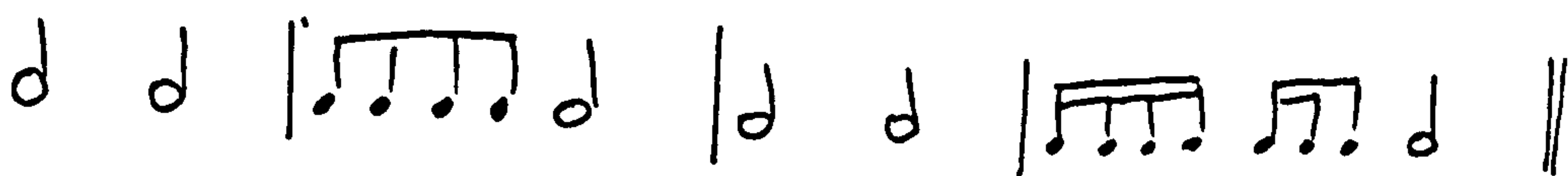
Metre in two's or fours is present in most examples like this xylophone piece (Vernacular):

Music Example 159



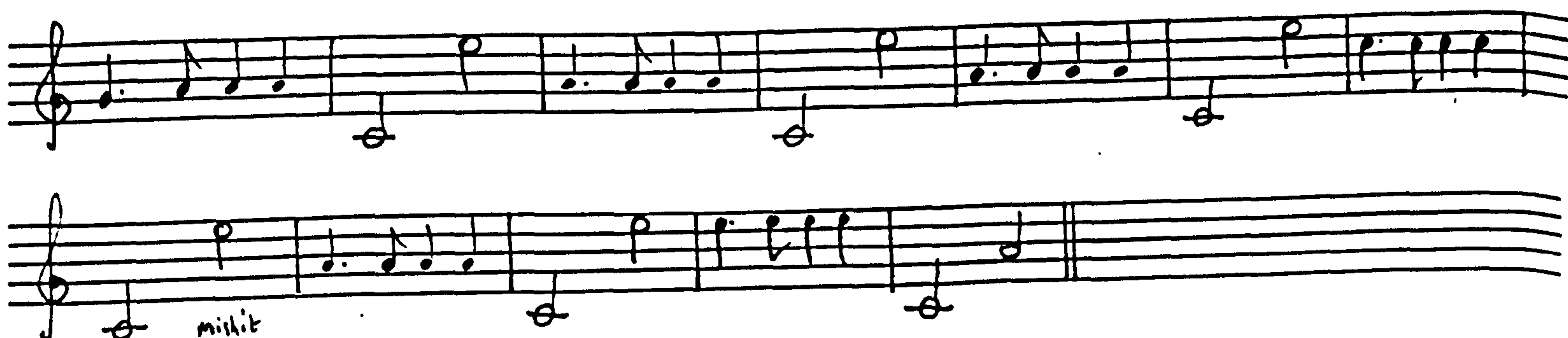
and this tambour piece (Speculative):

Music Example 160



Variation in duration is usually present and planned. The examples where it is not present are usually timbre explorations or all crotchet pieces. There is a sharp increase in the occurrence of dotted rhythms. This may represent the beginning of the Speculative in the rhythmic area as in this piece for xylophone:

Music Example 161



A sense of phrase is usually present and there is an increase in the number of longer phrases as in this song (Vernacular):

Music Example 162



There is an increase in the number of unusual or irregular phrase lengths as in this chime bar piece:

Music Example 163



which was refined on the repeat to one three bar phrase:

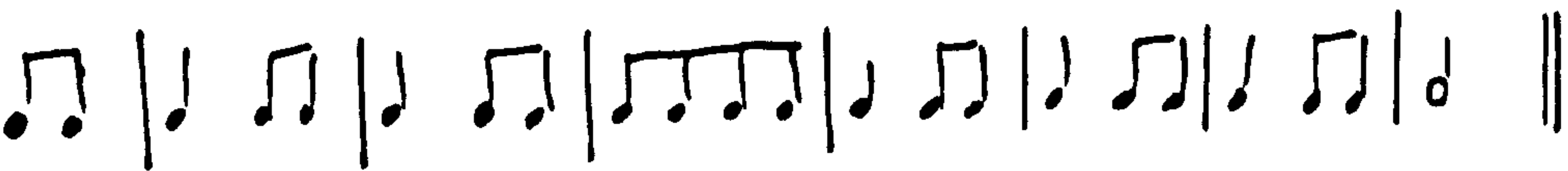
Music Example 164



In it can be seen the beginning of melodic development; and these less usual phrases are linked with the advent of the Speculative.

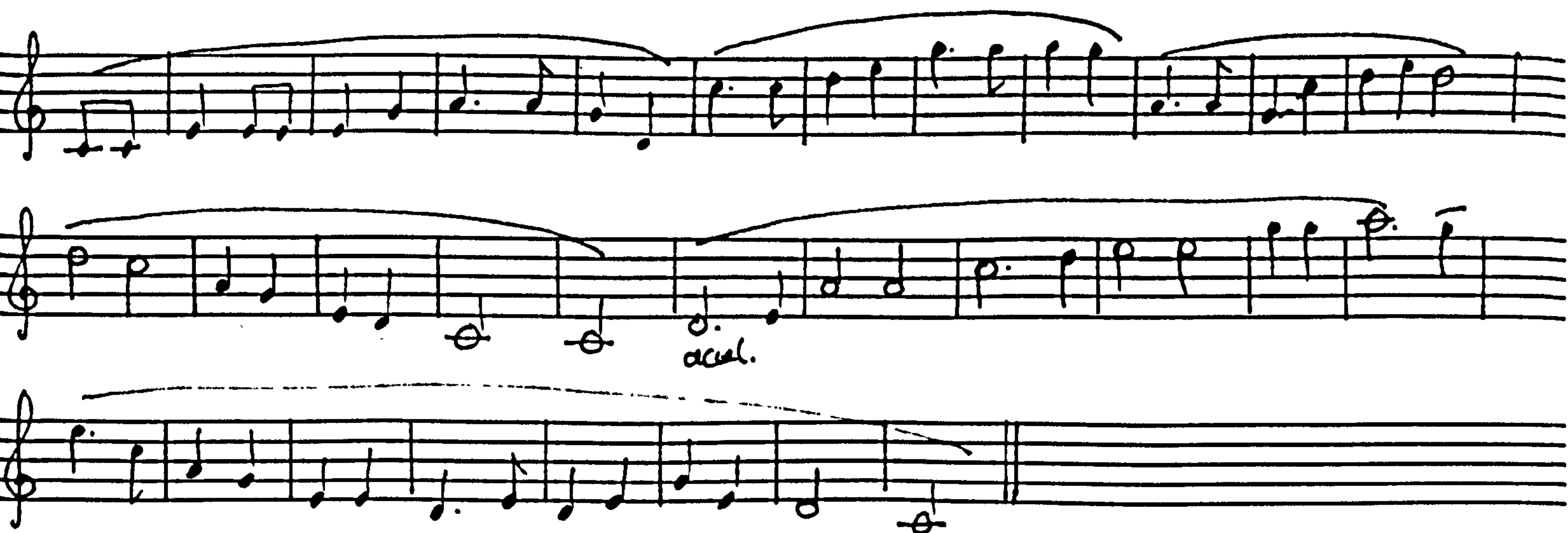
In form the majority of pieces are long and shaped. There are slightly more shorter pieces which may represent a refinement of the Vernacular Mode, playing the repeated fragments that characterised some of the eight year old pieces only once. There are examples of endings again, some rhythmic like this Indian cymbal piece (Vernacular):

Music Example 165



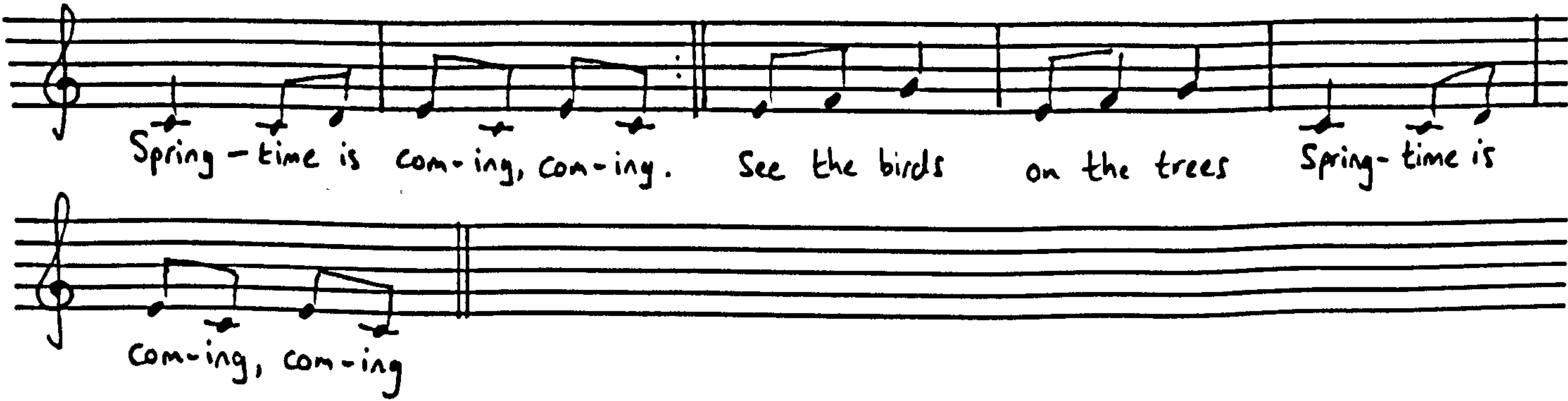
and some melodic like the end of this long xylophone exploration
with its irregular phrases (Personal):

Music Example 166



In the songs in particular there is the emergence of the repetition
of phrases (Speculative):

Music Example 167



In the area of pitch in no pieces does it appear to be random. An interest in scales reappears, sometimes a simple exploration like this song (Vernacular):

Music Example 168



sometimes as part of a longer exploration as in a metallophone piece quoted earlier (Music Example 158).

Jumps are now a feature of some pieces like the xylophone piece quoted earlier (Music Example 161) but unlike the younger explorations this is planned and calculated. Repeated notes are also featured in many pieces as in the same xylophone piece. All the examples using the three chime bars are well shaped (Vernacular):

Music Example 169



Examples of longer shaped pieces have already been given and of melodies shaped tonally like this song (Vernacular):

Music Example 170



There is the appearance of melodic variation as a way of constructing pieces. Often it is by way of developing a rhythmic fragment as in this metallophone piece (Vernacular):

Music Example 171



or this metallophone piece (Speculative):

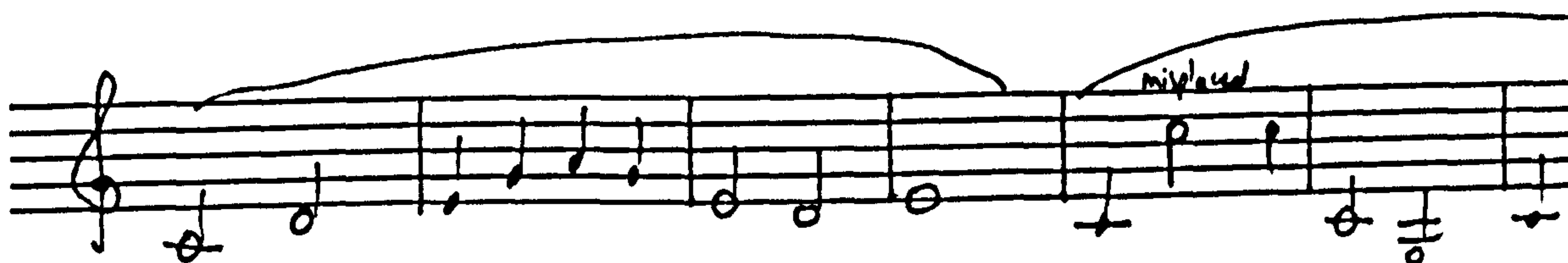
Music Example 172



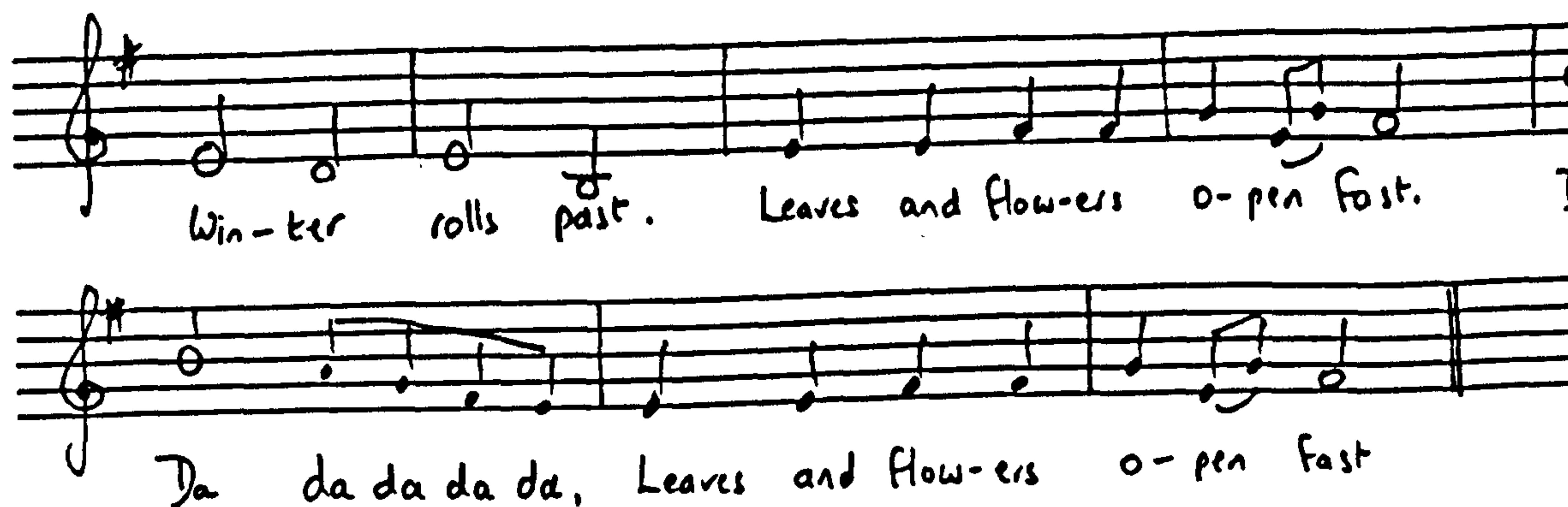
In the songs again a six note range predominates as in this well-rounded example (Vernacular):

Music Example 173

A few examples have a wide range like this Christmas song (Speculative):

Music Example 174

Still half the examples contain passages of vague tuning. There are also examples of the use of existing tunes. Now the variations are deliberate as in this song based on an Easter round. (Speculative)

Music Example 175

All the examples combining sounds are of ostinatti starting of the layer method, and sometimes ending that way as well. The composer always gives instructions and sometimes manages to lead the group through the patterns s/he is playing. More examples with a common pulse and the patterns fit together well as in this the castanets play:

Music Example 176

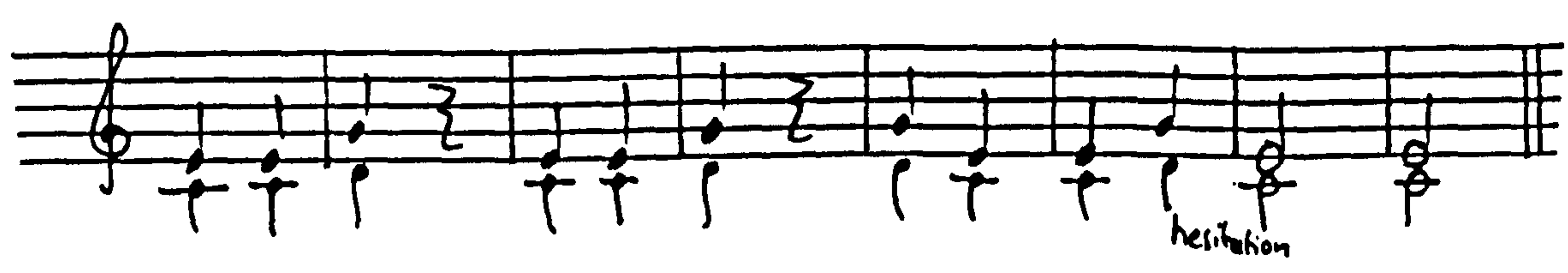


against the triangle:



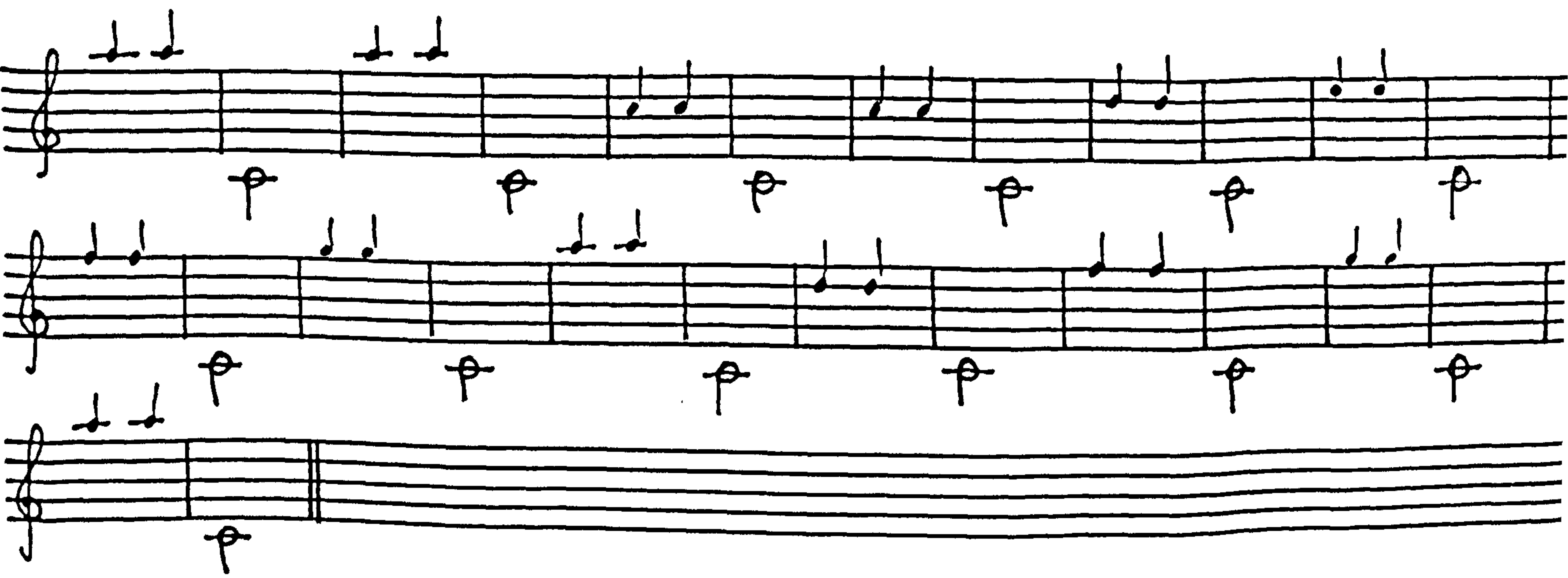
while the Indian cymbal plays on the beat. The composer plays the metallophone and explores its possibilities against this ostinato background. There are some examples of sticks used together on instruments (Speculative):

Music Example 177



and an interesting example of a drone like effect (Speculative):

Music Example 178



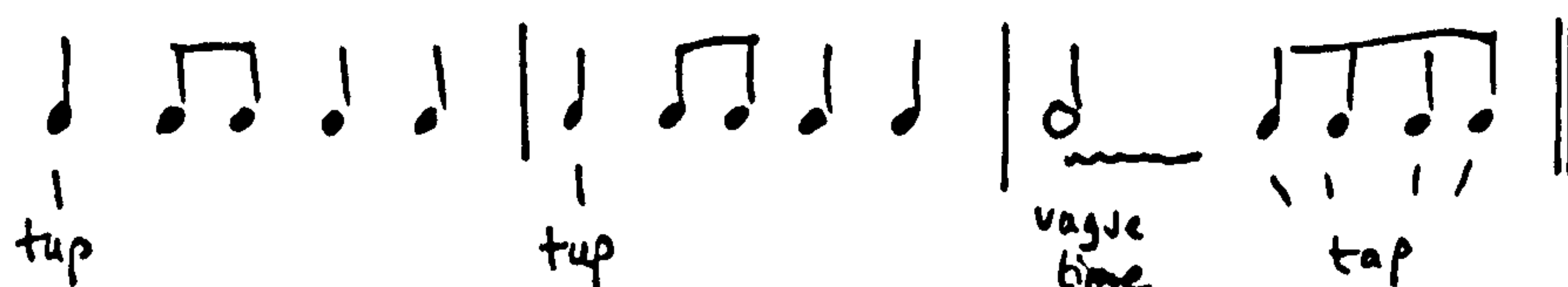
Less children could repeat their pieces but still a quarter could. The decline in number is due to the increase in the Speculative. This also leads to more refining of the original idea and repeating of the idea.

There is still a majority of Vernacular pieces but there is striking increase in the number of the Speculative ones.

Ten year old Compositions

These compositions show an increase in the concern with timbre again. Many of the pieces are Speculative in the area of timbre like this maraca piece:

Music Example 179



A tambour piece explores all its possibilities starting with a rub getting faster and slower and louder and softer, and then a passage in four time striking it, and ending with fingers tapping on the surface (Speculative). This xylophone piece not only uses the tone colour of the glissandi as an opening gesture but, at its climax

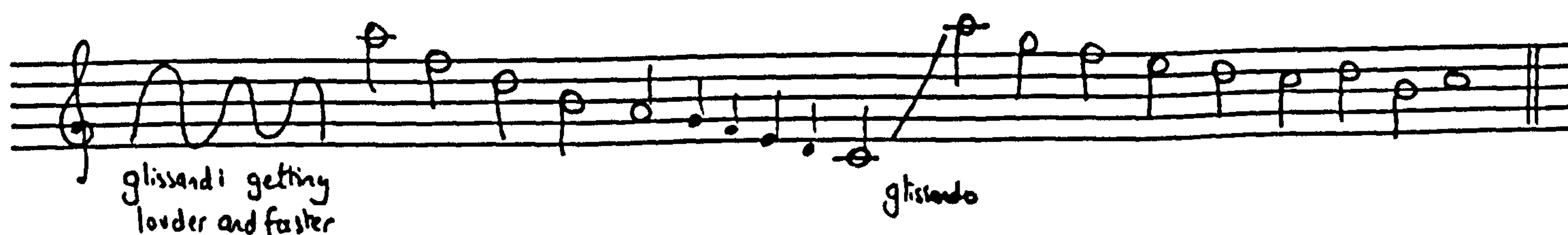
in the middle includes taps on various parts of the instrument and the table interspersed with short and long glissandi (Speculative):

Music Example 180



As can be seen from these examples there is renewed interest in dynamic change often linked with timbre exploration. Pieces get softer towards the end for example. This piece starts with opening glissandi getting louder and faster (Speculative):

Music Example 181



Pulse is present in most examples like this tambour piece (Vernacular):

Music Example 182

Again in the pieces where it is intermittent this is often due to attempts to introduce Speculative elements and the experiments with tone colour already quoted.

There is greater variety in the speed of the pieces with more slower as well as faster examples. The interest in changes of dynamics is often linked with speed changes especially at the end when pieces get slower and softer. This is often included in the instructions to players in the group pieces. In some of the group pieces, too, there are both slow and fast rhythms simultaneously.

Although there is metre present in the majority of examples, the number of pieces has decreased. Again this is often due to the increased Speculative element as seen in the pieces already quoted (e.g. Music Example 180). Again two's and fours are most common as in this gato drum piece (Vernacular):

Music Example 183

[The repeat indicates the use of the same pitches]

and in this chime bar piece (Speculative):

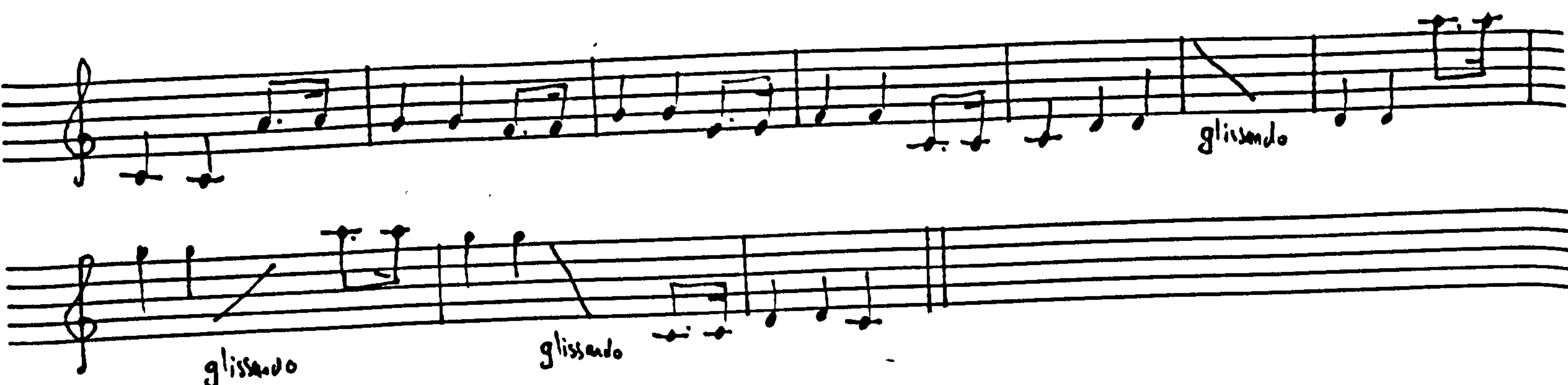
Music Example 184

Variation in duration is present in most pieces, it being absent mostly from those pieces exploring timbre. Again most pieces use two note values only like several of the examples already quoted (e.g. Music Example 1.). There is a striking increase in the number of syncopated patterns. Some are very difficult to notate like this striking example (Speculative):

Music Example 185

Dotted rhythms are still a feature of some pieces like this metallo-
phone piece which also shows the use of glissandi structurally
(Speculative):

Music Example 186



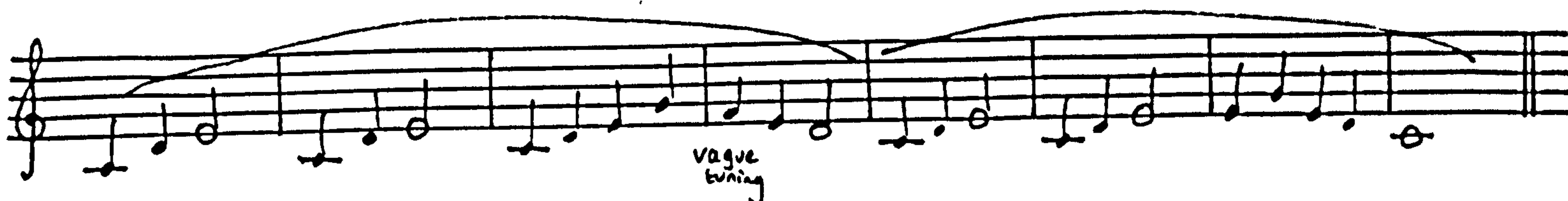
Phrase is present in the majority of examples. It is less
clear in the examples exploring timbre and in group pieces where
there is not a common pulse. Two bar and four bar phrases are
almost equally present. This song shows shaped two bar examples
(Speculative):

Music Example 187



This one shows longer examples (Speculative):

Music Example 188



There are more examples of unusual lengths and irregular phrases.

This is due to the increasing Speculative element, as in the use of longer note values in this chime bar piece (Speculative):

Music Example 189



In terms of form the majority were long and shaped as many of the examples already quoted show (e.g. Music Example 187). There is a great increase in beginning and ending gestures. Glissandi are common at the beginning, and the ending gestures again vary from rhythmic ones to melodic ones. An exploration of the timbre of the wooden agogo (Personal) in which it is struck and scraped

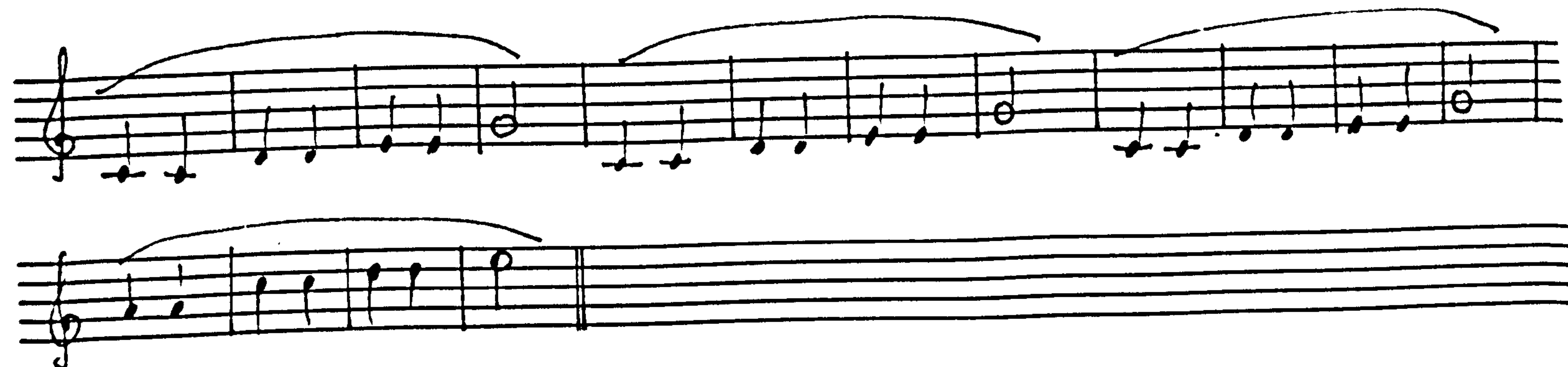
with a variety of beaters ends with a syncopated pattern. In this xylophone piece rhythm and melody form a close to the second phrase (Vernacular):

Music Example 190

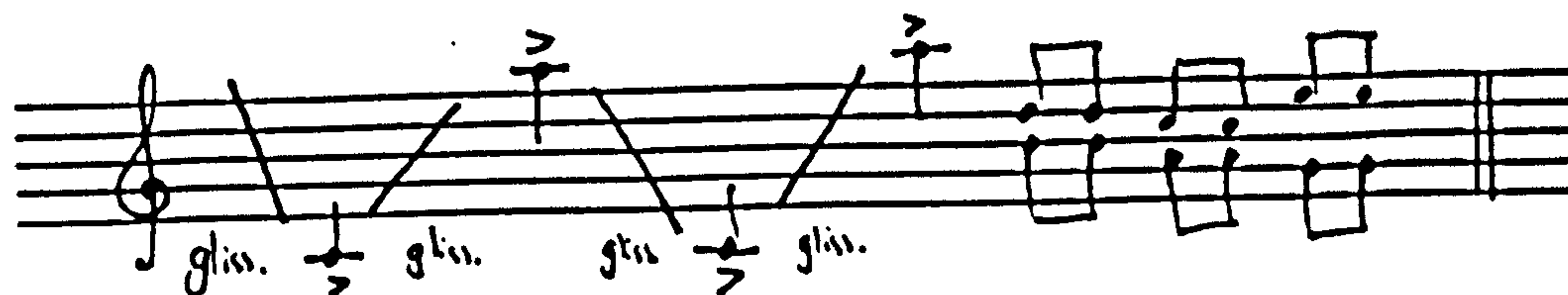


In this xylophone piece a closing phrase is added after three repeats of the same phrase (Speculative):

Music Example 191



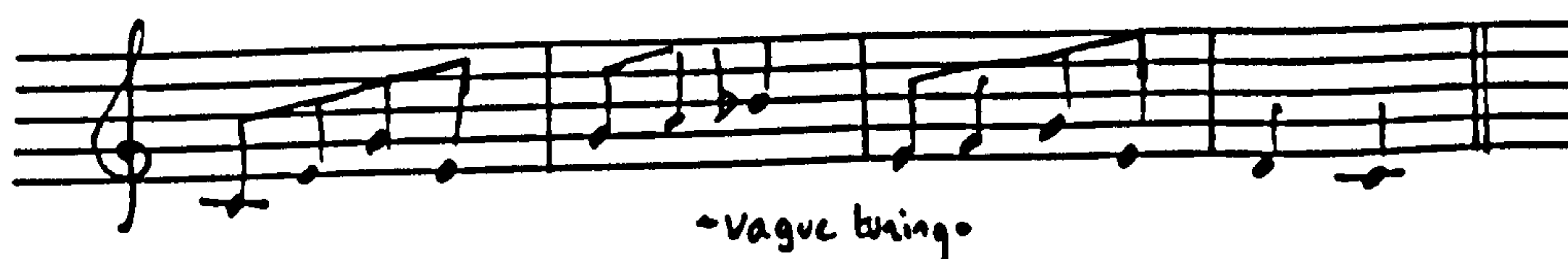
In the area of pitch there is still interest in scale passages as several of the examples already quoted show (e.g. Music Example 188). Glissandi again feature prominently but now in a more structural role. It can be seen in several examples already quoted and is clear in this metallophone piece (Speculative):

Music Example 192

Repeated notes are still a feature of some pieces like the metallophone piece already quoted (Music Example 186). In their attempts to exploit all the possibilities of the instruments there is renewed interest in the extremes of the instrument again used to structural purposes, as seen in the metallophone piece quoted above (Music Example 192). All the three note chime bar patterns are well shaped, repeated phrases still featuring prominently (Vernacular):

Music Example 193

There are many longer patterns many of which are tonally shaped like this hummed song (Speculative):

Music Example 194

One song contained a modulation (Speculative):

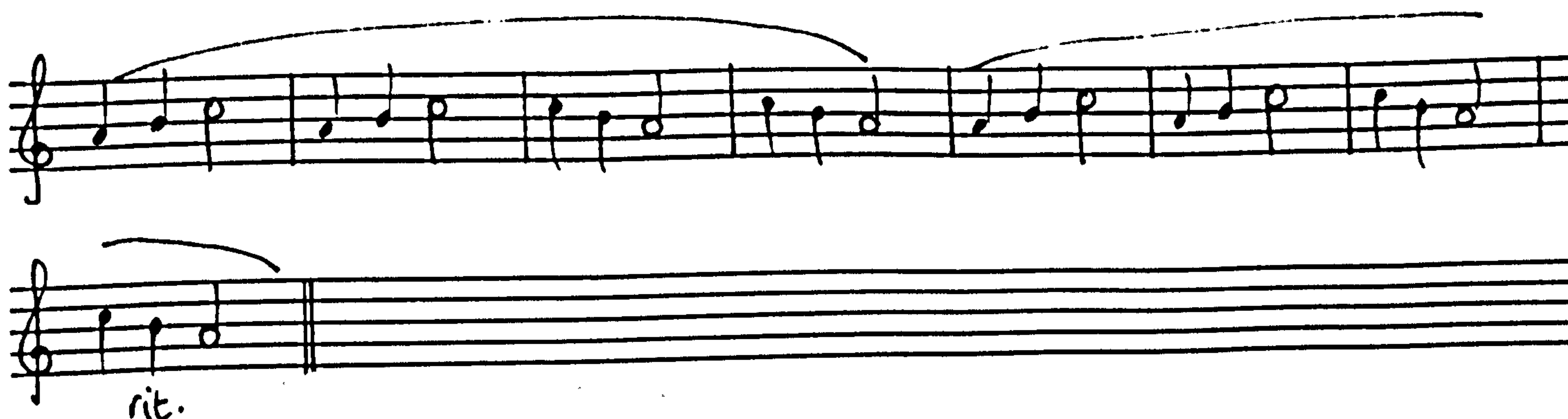
Music Example 195



Melodic variation is now a feature of many pieces as already seen.

Sometimes it is simple, like inverting a pattern (Speculative):

Music Example 196



Sometimes it is more complicated as in the metallophone pattern quoted above. Sequence begins to appear as in the hummed song already quoted (Music Example 187).

Six notes is again the most common range for the vocal melodies. There is increased security in tuning.

In the pieces combining sounds, always instructions are given and sometimes they are carried out. Pieces based on ostinati with a layer start and sometimes finish predominate and there are more beginnings and endings. One piece (Vernacular) used small cymbals playing:

Music Example 197



and woodblock on the beat, chime bars in the same rhythm as the small cymbal, and two sticks playing together on the chime bars is the stop signal. One piece has this xylophone tune accompanied by glissandi on a metallophone (Vernacular):

Music Example 198



More examples had a common pulse.

More pieces use two sticks together like this one exploiting contrary and similar motion (Speculative):

Music Example 199



There is this example of a pedal effect with a scale created (Speculative):

Music Example 200



More children could repeat their composition but more said that they couldn't. This is often because the Speculative element is still not fully integrated into the style and the whole is much more complex to recall. It could be that this is the moment to introduce some form of notation to obviate this.

Now the majority of pieces are Speculative and indeed some of the pieces placed in the Personal classification could well be Speculative pieces that haven't quite worked.

Eleven year old Compositions

Again there was considerable interest in timbre and a Speculative approach to it. These explorations are often very sophisticated especially on the tambour like one that involves fingers flipping (Speculative) and rubbing and getting faster in the middle ending with a

beat, and this one where the semiquavers are fingers tapping, which makes their rhythm rather vague (Speculative):

Music Example 201

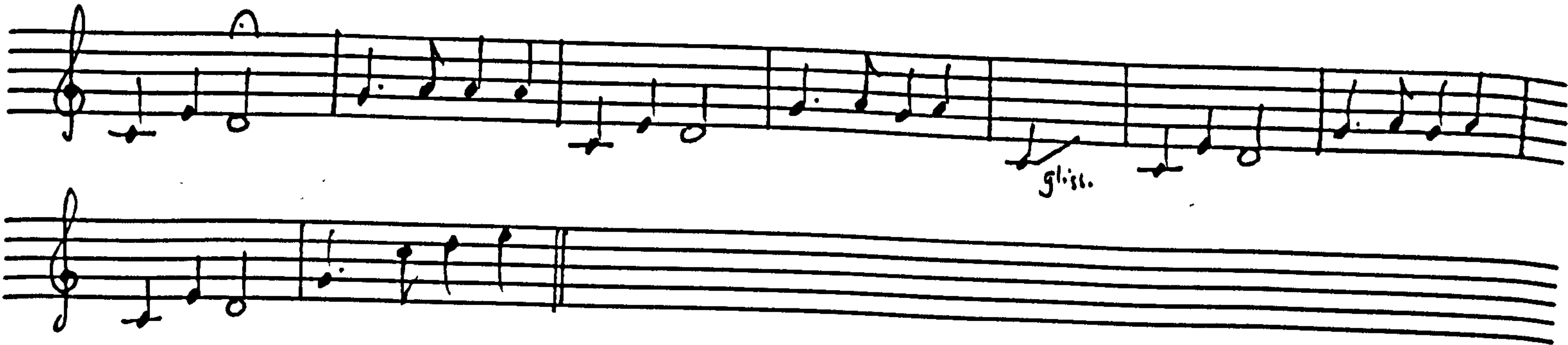
Pulse is present in most examples, this short song being typical (Vernacular):

Music Example 203



The intermittent examples include those pieces where there is a slight hesitation while hunting for the right note as at the opening of this piece for xylophone, which also shows a structural use of timbre exploration in its use of the short glissandi in the middle (Speculative):

Music Example 204



The pieces in which there is no pulse present are largely pieces that are primarily concerned with exploring timbre.

In terms of speed, moderate examples still predominate but there are slow and fast examples. This gato drum piece is fast (Vernacular):

Music Example 205



The pitch of the first three bars is the same. Several of the slow pieces were produced by one girl in one session, one being a slow shake for tubo six times with some faster ones at the end, a very sensitive piece (Personal). This xylophone piece is typical of the moderate pieces (Speculative):

Music Example 206



Changes of speed were often linked with changes in volume like the piece for tubo in which long shakes alternate with rapid ones already mentioned. In some of the group pieces both fast and slow rhythms are present simultaneously.

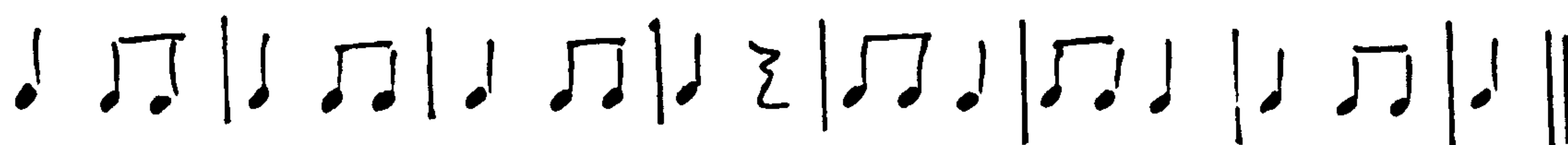
Metre is present in most examples. Those examples where it is not present are largely those concerned with timbre. The pieces are almost equally divided between 2 and 4 beat metres. This song is typical of the two beat pieces (Speculative):

Music Example 207



as is this maraca piece (Speculative):

Music Example 208



This song is typical of the four beat examples (Vernacular):

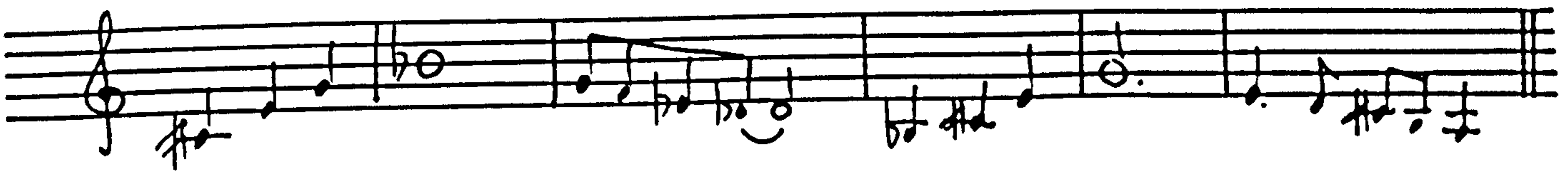
Music Example 209



A few pieces are in three like this chime bar piece (Speculative):

Music Example 210

This meandering chromatic song is typical of the mixed metres (Speculative):

Music Example 211

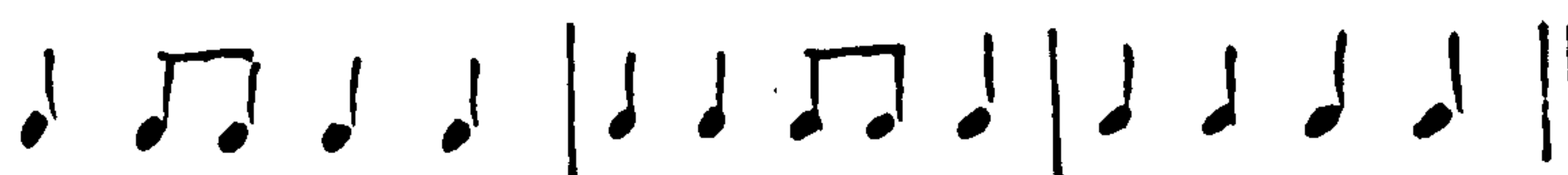
Most examples contain planned variation of duration and those without variation are often all crotchets like this gato drum piece (Vernacular):

Music Example 212

Now a greater variety of note values than just two is present in a large number of examples, like the use of semiquavers in this xylophone piece (Vernacular):

Music Example 213

Some still use two note values only (Vernacular):

Music Example 214

Dotted rhythms are popular like this xylophone piece which develops a rhythmic fragment (Speculative):

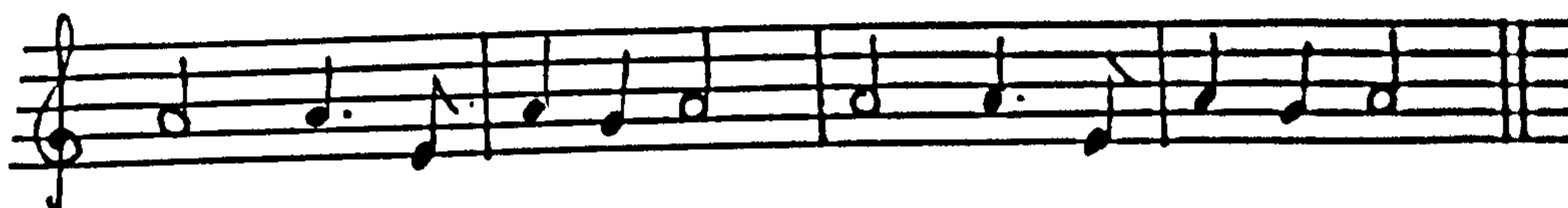
Music Example 215

Syncopation is also popular as in this chime bar piece which also develops a short fragment (Speculative):

Music Example 216

A sense of phrase is evident in most examples. Most are two bar phrases like this chime bar piece (Vernacular):

Music Example 217



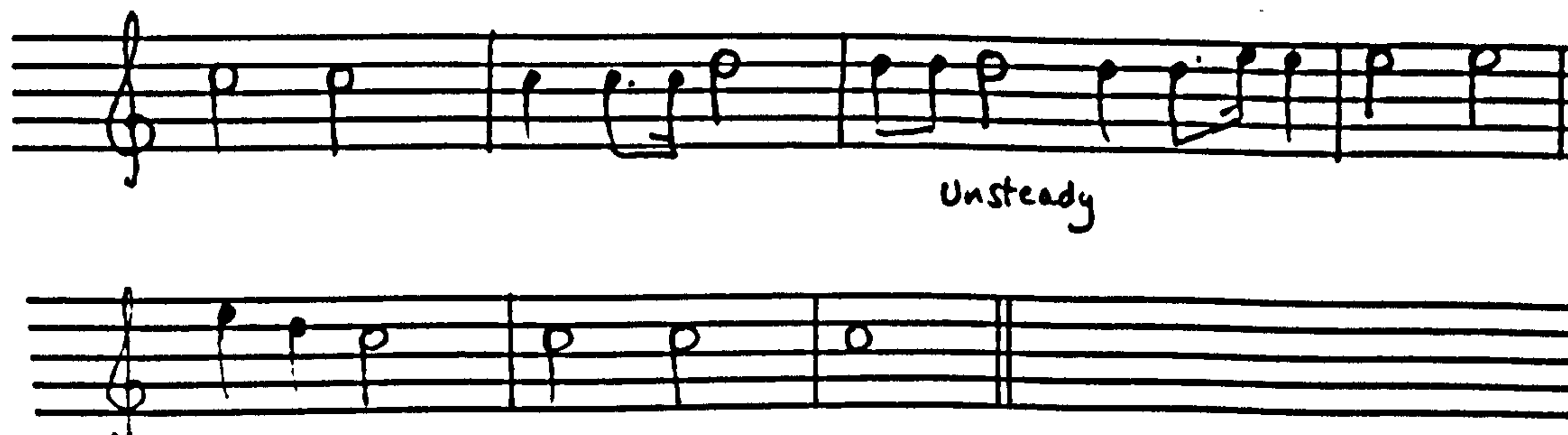
Of the four bar examples this chime bar piece is typical (Speculative):

Music Example 218



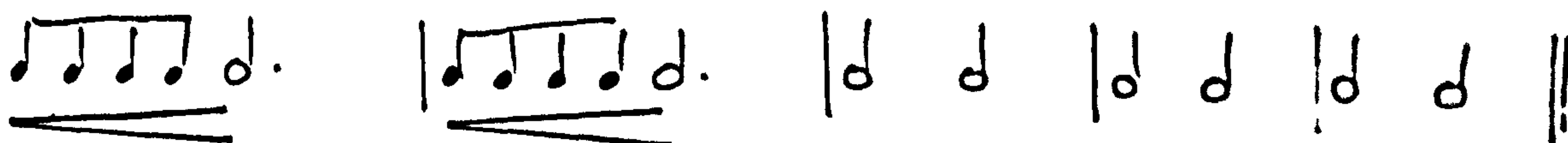
Among the examples of other lengths are those in which the grasp of metre slipped as in the xylophone piece (Vernacular):

Music Example 219



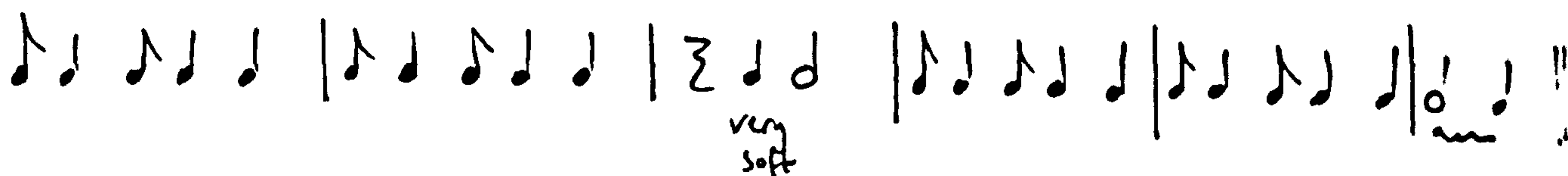
Other examples are in mixed metres like this tambour piece (Speculative):

Music Example 220



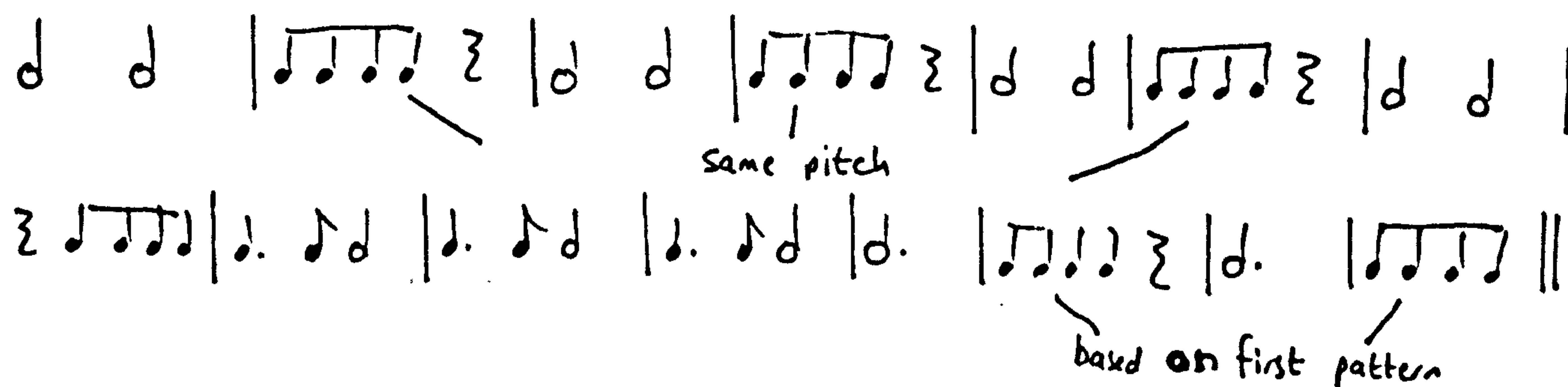
There is also this sensitive example of three bar phrases on the cabassa (Speculative):

Music Example 221



This gato drum piece in its mixed length phrases shows an attempt at ternary structure as well (Speculative):

Music Example 222



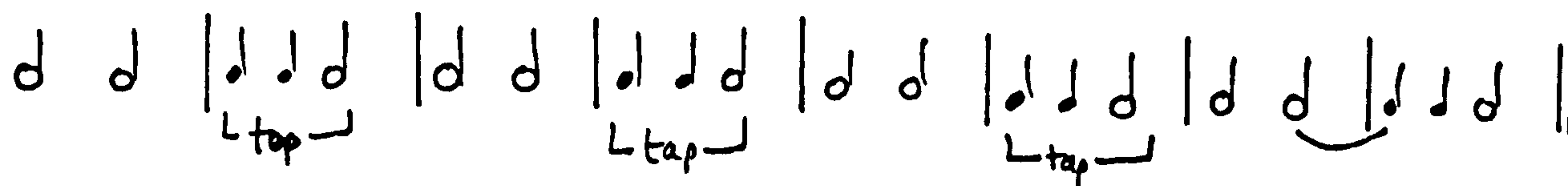
In terms of form most were long and shaped, this metallophone piece being typical (Speculative):

Music Example 223

Most pieces have some sort of ending gesture. This often contains the Speculative element, as in the shortening of the pattern in this gato drum piece (Speculative):

Music Example 224

or the syncopation at the end of this maraca pattern (Speculative):

Music Example 225

A glissando with an ending note concludes this metallophone piece (Speculative):

Music Example 226

This xylophone piece has a melodic ending tag (Speculative):

Music Example 227

One example of repeating a phrase at the end (Music Example 206) has already been given, and here is a further example of a ternary structure (Speculative):

Music Example 228

A few pieces had opening gestures like an initial accelerando and crescendo, to a steadier maraca piece (Speculative):

In terms of pitch, scales were still of interest, now integrated into melodies, like this piece for pentatonic xylophone (Speculative):

Music Example 229



Glissandi are popular used in a structural role as seen in Music Example 204. Repeated notes are a feature of some pieces as seen in syncopated chime bar piece already quoted (Music Example 216). Some melodies still exploit the extremes of the instrument like this piece for two sticks on metallophone (Speculative):

Music Example 230



There are many examples of shaping a melody tonally, like this minor metallophone tune which shows inversion as well (Speculative):

Music Example 231

This song has a clear sense of tonal structure in its varied phrase endings and a sense of coming home at the end (Speculative):

Music Example 232

This song too has similar shaping (Speculative):

Music Example 233



Many examples contain development of melodic fragments as has already been seen (e.g. Music Example 216). This metallophone piece contains both sequence and inversion (Speculative):

Music Example 234



The range of the vocal melodies varies with a quarter exceeding the octave. Tuning is much more secure although examples of vague tuning are still present.

In pieces combining sounds all give instructions and many are carried out. Some managed to get all the parts in time with one another whereas others fail. There is usually a starting and finishing signal. All the pieces are based on ostinati. Some start and finish together while others favour the layer start and sometimes

finish. Some examples modify the layer structure by bringing in or fading out two instruments together. Several pieces for solo player on the pitched percussion contain examples of the sticks being used together to create harmony like a metallophone piece which after a glissando, explores seconds and thirds (Speculative) and a xylophone piece where one stick has a glissando while the other develops a tune underneath it (Speculative).

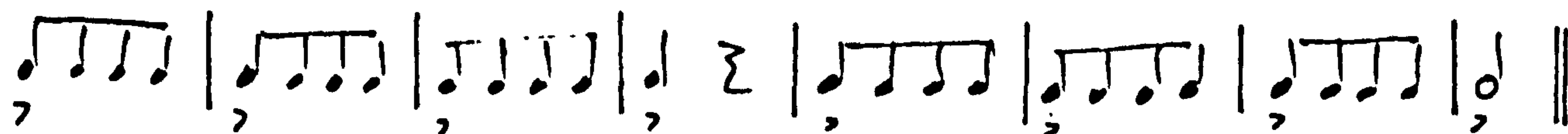
In terms of whether they could repeat the piece there is an increase in those who couldn't. These were in general the Speculative patterns. Some refined their pieces like this pattern (Vernacular):

Music Example 235



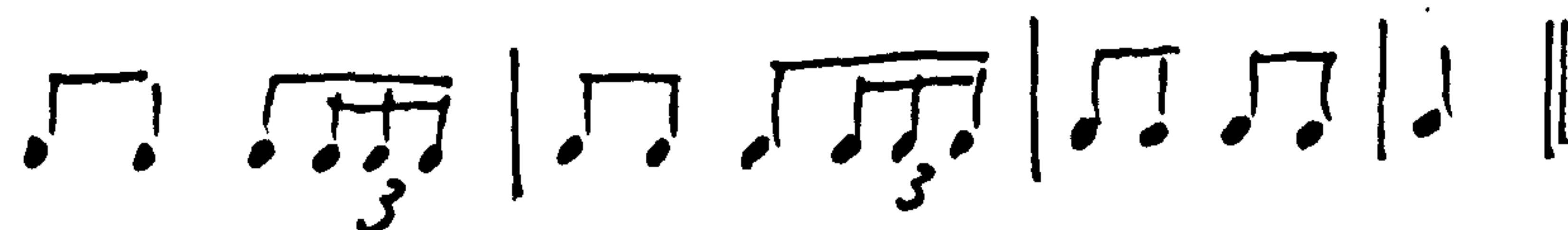
which lost its uneven phrase lengths on repeat:

Music Example 236



Sometimes quite complex patterns are nearly repeated exactly like this maraca pattern:

Music Example 237



The majority of pieces are in the Speculative Mode with its emphasis on structure. The slight decrease in the Personal Mode is due to the greater integration of these elements into the style.

Summary

The appendix sets out in more detail the way in which in the spiral model was developed. It was in no way conceived academically and applied to the data but evolved from analysis of the compositions, frequently undergoing changes in the early stages. In the foregoing analyses can be seen the musical characteristics that make up each mode in the pieces I have collected. In giving musical examples with the description of the mode in which each was placed, I hope that the reader has been able to share in the judgements that I made during my analysis.